ET1
ENTERPRISE TABLET
USER GUIDE

ET1 ENTERPRISE TABLET USER GUIDE

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev A	12/23/2011	Initial release.

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ABOUT THIS GUIDE

Introduction

This guide provides information on using the ET1 Enterprise Tablet and accessories.

NOTE Screens pictured in this guide are samples and can differ from actual screens.

Documentation Set

The documentation set for the ET1 provides information for specific user needs, and includes:

- **ET1 Enterprise Tablet Quick Start Guide** - describes how to get the ET1 up and running.
- **ET1 Enterprise Tablet User Guide** - describes how to use the ET1.
- **ET1 Enterprise Tablet Integrator Guide** - describes how to set up the ET1 and accessories.

Configurations

This guide covers the following configurations:

Configuration	Radios	Display	Memory	Data Capture Options	Operating System
ET1N0	WLAN: 802.11a/b/g/n WPAN: Bluetooth v2.1 with EDR	7.0” WSVGA Color	1 MB RAM / 4 GB Flash / 4 GB microSD card	camera, optional CS3070	Android-based, Android Open-Source Project 2.3

Software Versions

To determine the current software versions touch Menu > **Settings** > **About device**.

- Android version
- Build number.

Chapter Descriptions

Topics covered in this guide are as follows:

- *Chapter 1, Getting Started* provides information on getting the ET1 up and running for the first time.
- *Chapter 2, Using the ET1* provides basic instructions for using the ET1, including powering on and resetting the ET1.
- *Chapter 3, Data Capture* provides information for capturing bar code data using the internal camera and optional scan modules and Bluetooth scanner.
- *Chapter 4, WLAN* provides information for configuring Wi-Fi.
- *Chapter 5, Bluetooth* provides information for configuring Bluetooth.
- *Chapter 6, Photos and Videos* explains how to take photos, capture videos and video images in the Gallery application.
- *Chapter 7, Email* provides information for adding Email accounts and reading and sending email messages.
- *Chapter 8, Calendar* provides information using the Calendar application.
- *Chapter 9, Accessories* describes the available accessories and how to use them with the ET1.
- *Chapter 10, Maintenance & Troubleshooting* includes instructions on cleaning and storing the ET1, and provides troubleshooting solutions for potential problems during ET1 operation.
- *Appendix A, Technical Specifications* provides the technical specifications for the ET1.

Notational Conventions

The following conventions are used in this document:

- *Italics* are used to highlight the following:
  - Chapters and sections in this and related documents
  - Icons on a screen.
- **Bold** text is used to highlight the following:
  - Dialog box, window, and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Button names on a screen.
- bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential

- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Related Documents

- *ET1 Enterprise Tablet Quick Start Guide*, p/n 72-148508-xx
- *ET1 Enterprise Tablet Regulatory Guide*, p/n 72-148509-xx
- *ET1 Enterprise Tablet Integrator Guide*, p/n 72E-148511-xx
- *Symbol CS3000 Series Scanner Product Reference Guide*, p/n 72E-136088-xx
- *MSP Client Software Guide*, p/n 72E-128805-xx
- *MSP 3.3.1 Release Notes*, p/n 72E-100160-xx.

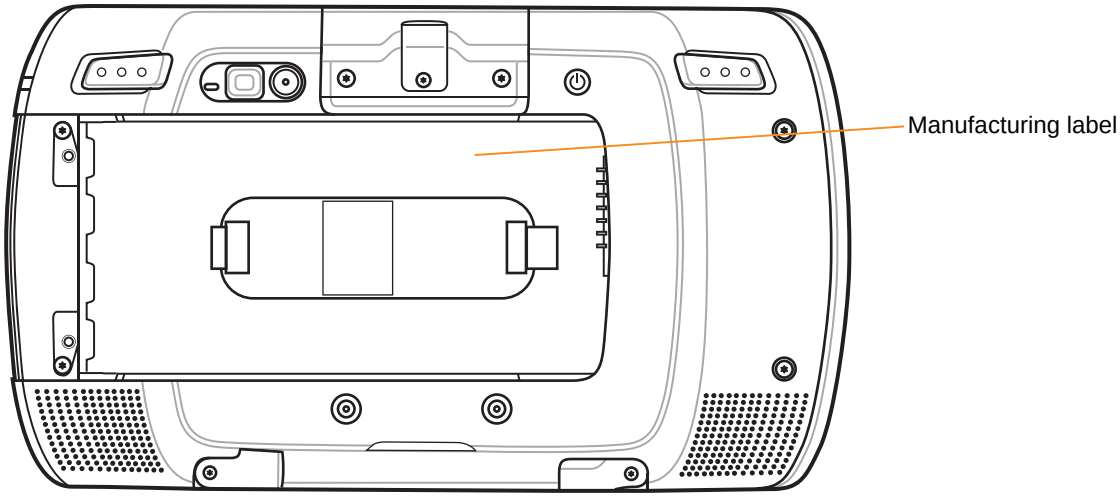
For the latest version of this guide and all guides, go to: http://supportcentral.motorola.com

Service Information

If you have a problem with your equipment, contact Motorola Solutions Global Customer Support Center for your region. Contact information is available at: http://www.motorolasolutions.com/support.

When contacting Motorola Solutions Global Customer Support Center, please have the following information available:

- Serial number of the unit (found on manufacturing label)
- Model number or product name (found on manufacturing label)
- Software type and version number



Motorola responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Motorola Solutions Global Customer Support Center, you may need to return your equipment for servicing and will be given specific directions. Motorola is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your product from a Motorola business partner, contact that business partner for support.

CHAPTER 1 GETTING STARTED

Features

This chapter provides the features of the ET1 and explains how to set it up for the first time.

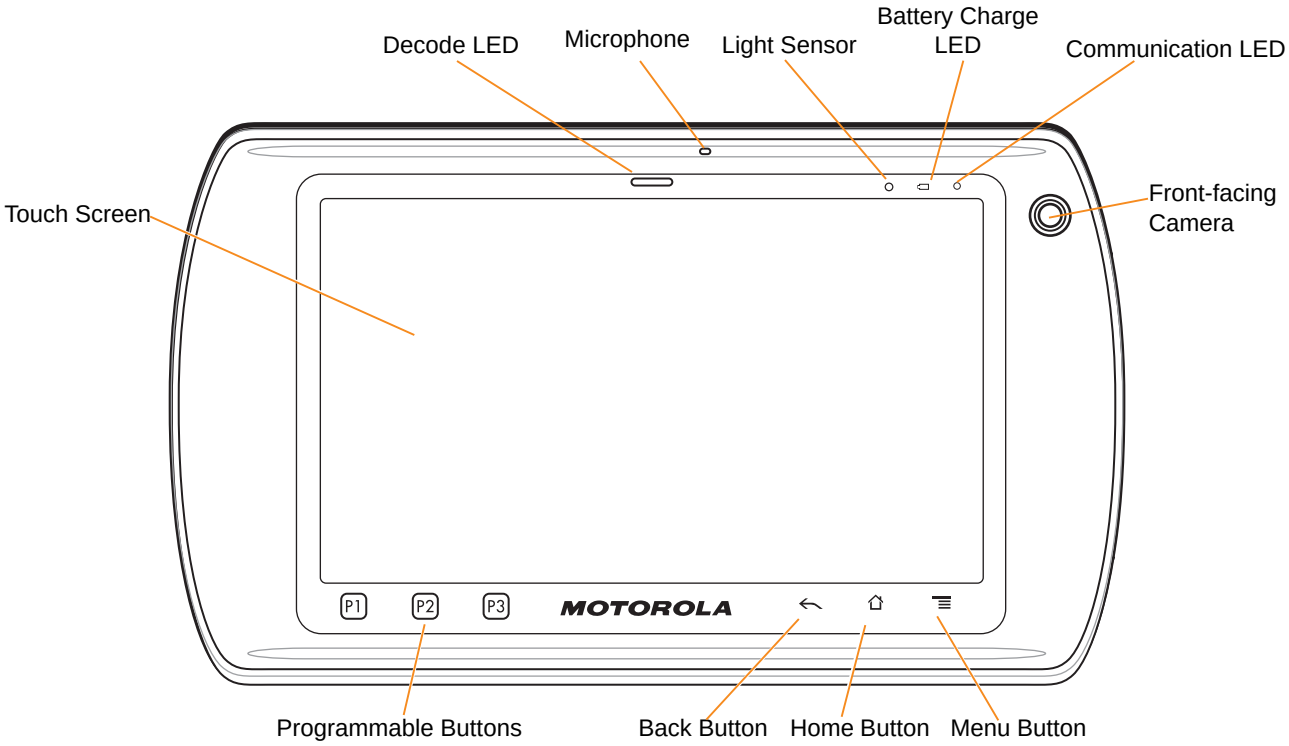


Figure 1-1 *ET1 Front View*

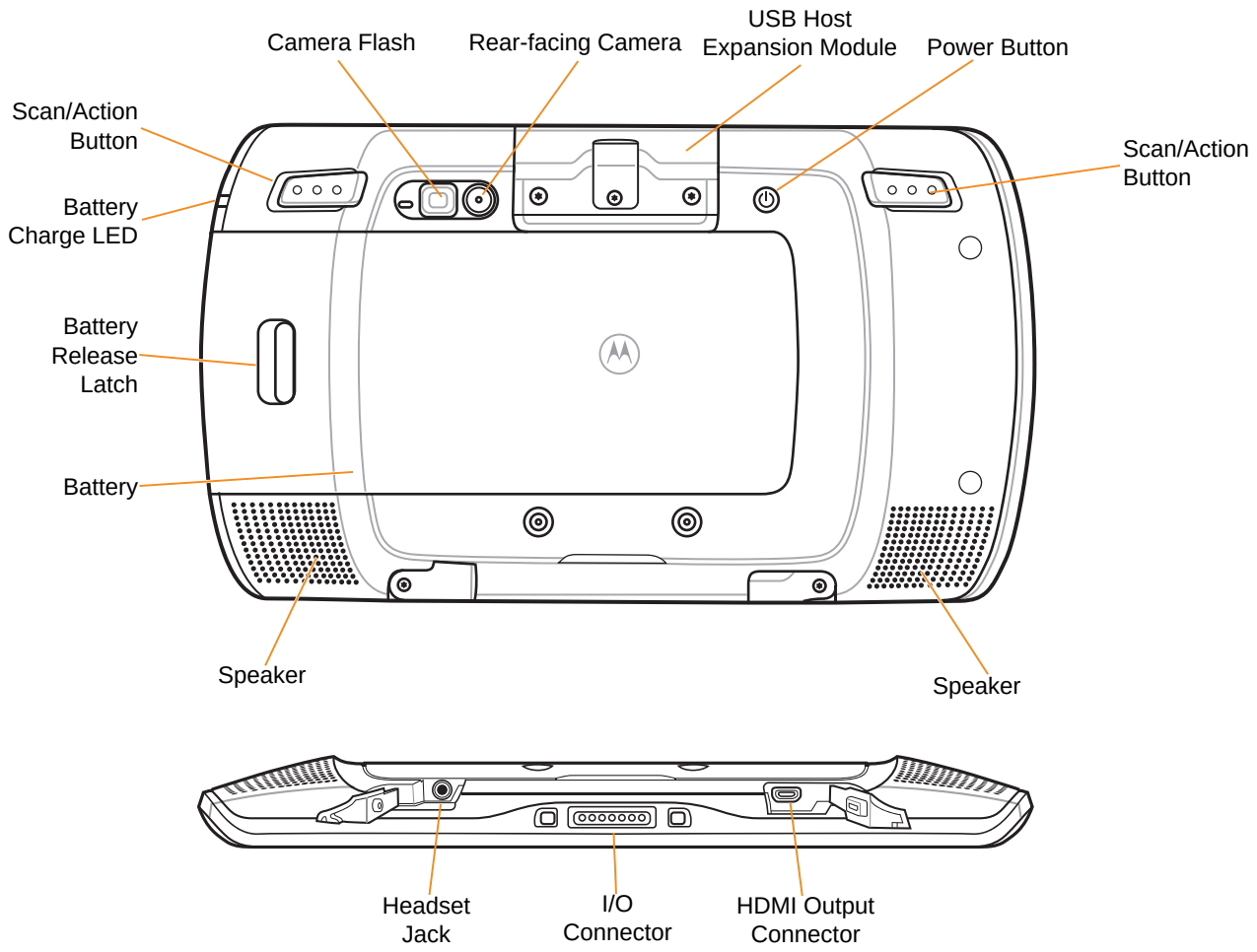


Figure 1-2 *ET1 Rear View*

Table 1-1 *Features*

Item	Function
Decode LED	Indicates decode functionality. Lights red when scanning in process. Lights green indicating a successful decode.
Microphone	Use for making voice recordings.
Light Sensor	Determines ambient light for controlling display backlight intensity.
Battery Charge LED	Indicates battery charge state.
Communication LED	User programmable.
Touch Screen	Displays all information needed to operate the ET1.
Front-facing Camera	Use for capturing a front view picture. Use for making video calls with third-party video applications.
P1	Decreases the volume (default). User configurable.
P2	Increases the volume (default). User configurable.

Table 1-1 *Features (Continued)*

Item	Function
P3	Launches the **Search** application (default). User configurable.
Back Button	Displays the previous screen. Closes the keyboard if the on-screen keyboard is open.
Home Button	Displays the Home screen with a single touch. Displays recently used applications when held for a short period of time.
Menu Button	Opens a menu with items that affect the current screen or application.
Right Scan/Action Button	Opens the scan application (default). Programmable.
Rear-facing Camera	Takes photos, videos and captures bar code data.
USB Host Expansion Module	Provides USB host connection to a peripheral.
Power Button	Press and hold to turn on the ET1. Press to turn the screen on or off. Press and hold to select one of these options: • **Silent mode** - The device is set to vibrate mode; all sounds are disabled except for alarms. • **Airplane mode** - Disable all wireless connections. • **Battery swap** - Shutdown the device when replacing the battery. • **Reset** - Reboot the ET1 if software stops responding. • **Power off** - Turn off the ET1.
Left Scan/Action Button	Opens the scan application (default). Programmable.
Speakers	Provides audio output for video and music playback.
Headset Jack	Connects to mono headphones (3-wire, 2.5 mm plug).
I/O Connector	Provides power to the device from cradles and cables and provides USB client and host communications.
HDMI Output Connector	Provides HDMI audio and video signals to an HDMI compatible monitor or television.

Unpacking

Carefully remove all protective material from the ET1 and save the shipping container for later storage and shipping.

Verify the following items are in the box:

- ET1 Enterprise Tablet with 4 GB micro secure digital (SD) card installed
- 4620 mAh Lithium-ion battery
- Quick Start Guide
- Regulatory Guide.

Inspect the equipment for damage. If any equipment is missing or damaged, contact the Motorola Solutions Global Customer Support Center immediately. See *page xiii* for contact information.

Getting Started

To start using the ET1 for the first time:

- Install the battery
- Charge the ET1
- Power on the ET1.

Installing the Battery

To install the battery:

1. Align the tracks on the side of the battery with the rails in the battery compartment.
2. Push the battery in until the battery release latch snaps into place.
3. If the battery is charged, press and hold the Power button for two seconds until the splash screen appears.

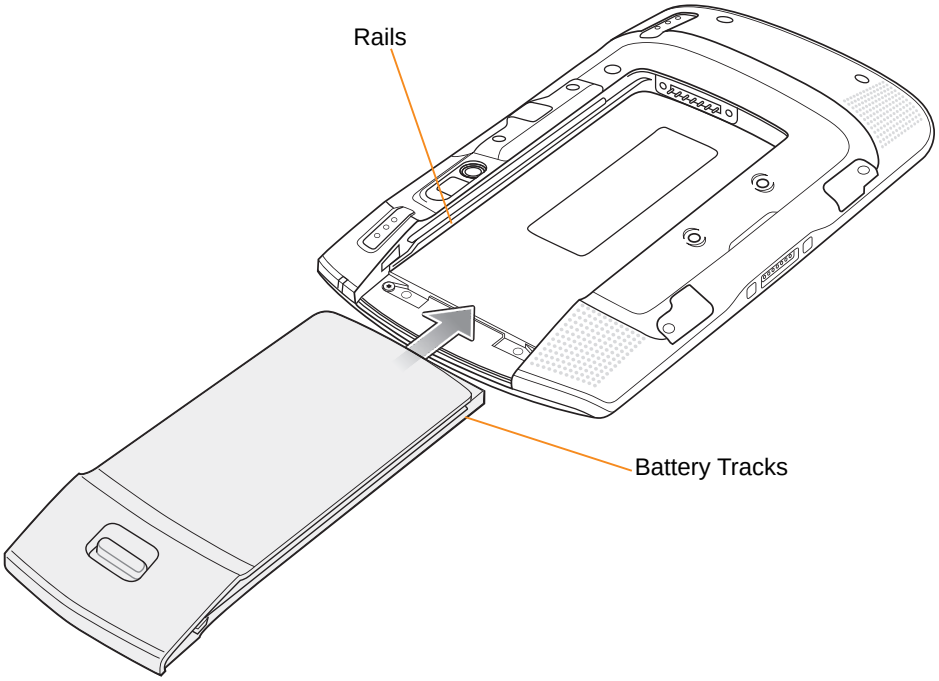


Figure 1-3 *Inserting the Battery*

Charging the Battery

CAUTION Ensure that you follow the guidelines for battery safety described in *Battery Safety Guidelines on page 10-1*.

Charging the Main Battery

Before using the ET1 for the first time, charge the main battery until the Battery Charge light emitting diode (LED) turns solid green (see *Table 1-2 on page 1-6* for charge status indications). To charge the ET1, use a cable or a cradle with the appropriate power supply. For information about the accessories available for the ET1, see *Chapter 9, Accessories*.

The ET1 is equipped with a memory backup battery that automatically charges from the fully-charged main battery. When using the ET1 for the first time, the backup battery requires approximately 40 hours to fully charge. This is also true any time the backup battery is discharged, which occurs when the main battery is removed for several hours. The backup battery retains random access memory (RAM) data in memory for at least 15 minutes (at room temperature) when the ET1's main battery is removed, when Battery Swap feature is used. When the ET1 reaches a very low battery state, the combination of main battery and backup battery retains RAM data in memory for at least 36 hours.

For cable and cradle setup and charging procedures refer to the *ET1 Enterprise Tablet Integrator Guide*.

- USB/Charge Cable
- Single-slot USB Docking Cradle
- Four-slot Charge Only Docking Cradle.

To charge the main battery:

1. Connect the charging accessory to the appropriate power source. See *Chapter 9, Accessories* for more information.

2. Insert the ET1 into a cradle or attach to a cable. The ET1 begins charging. The Battery Charge LEDs blink yellow while charging, then turns solid green when fully charged. See *Table 1-2* for charging indications.

The 4620 mAh battery charges in less than six hours.

Table 1-2 *Battery Charge LED Status*

Status	Indication
Off	ET1 is not charging. ET1 is not inserted correctly in the cradle. ET1 is not connected to a power source. Charger or cradle is not powered.
Slow Blinking Yellow (3 blinks every 2 seconds)	ET1 is charging.
Solid Green	Charging complete.
Fast Blinking Yellow (3 blinks/second)	Charging error, e.g.: • Temperature is too low or too high. • Charging has gone on too long without completion (typically eight hours).
Flashes Yellow three times when Power button pressed	Critical battery state. Battery too low to boot device.
Fast blinking Yellow (when Power button pressed)	Battery over-temperature condition. Device shuts down. Battery will not charge until temperature returns to normal operating value.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Note that charging is intelligently controlled by the ET1. To accomplish this, for small periods of time, the ET1 or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The ET1 or accessory indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 1-2*.

Charging Spare Batteries

See *Chapter 9, Accessories* for information on using accessories to charge spare batteries.

Powering On the ET1

Press the Power button until the Battery Charge LED flashes three times. The splash screen displays for about a minute as the ET1 initializes its flash file system. Note that these windows also appear upon reset.

Replacing the Battery

NOTE Do not remove microSD card while in Battery Swap mode.

Ensure that the Battery Swap mode procedures are followed, otherwise the backup battery will deplete quickly.

To replace the battery:

1. Press the **Power** button until the **Device options** menu displays.
2. Touch **Battery Swap**. The Scan LED lights red.
3. Wait until the Scan LED turns off.
4. Press thumb against the side of the ET1 and battery. Using the index and middle fingers, move the battery release latch toward thumb.
5. Pull the battery out of the battery compartment.

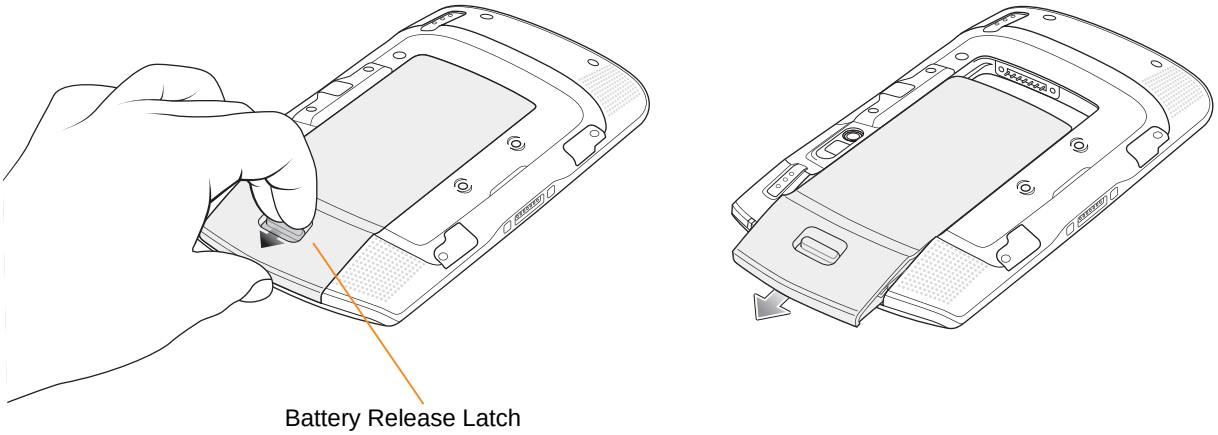


Figure 1-4 *Removing the Battery*

6. Align the tracks on the side of the replacement battery with the rails in the battery compartment.
7. Push the battery in until the battery release latch snaps into place.
8. Press the Power button to turn on the ET1.

Replacing the microSD Card

CAUTION Follow proper electrostatic discharge (ESD) precautions to avoid damaging the SD card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

Changing the microSD card can change the functionality of the ET1.

To replace the microSD card:

1. Press the **Power** button until the **Device options** menu displays.
2. Touch **Power off**.

3. Touch **OK**.
4. Wait for the ET1 to power off completely.
5. Press thumb against the side of the ET1 and battery. Using the index and middle fingers, move the battery release latch toward thumb.
6. Pull the battery out of the battery compartment.
7. Lift the access door.

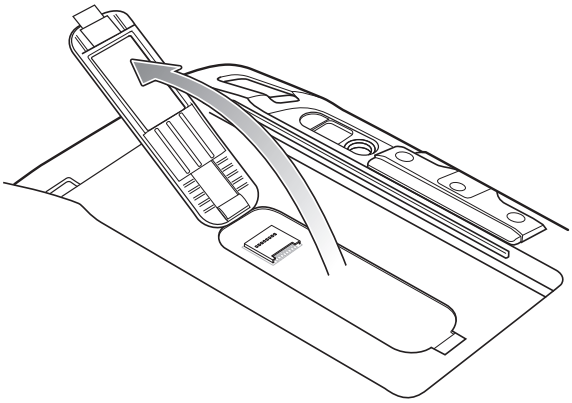


Figure 1-5 *Lift Access Door*

8. Remove the microSD card from the card holder.
9. Align the replacement microSD card with the card holder. Ensure that the contacts on the card are facing down and toward the card holder.
10. Insert the microSD card into the card holder.

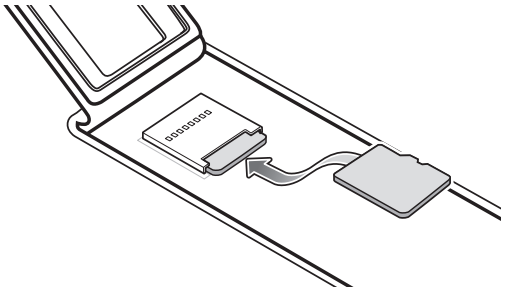


Figure 1-6 *Insert microSD Card*

11. Close the access door.

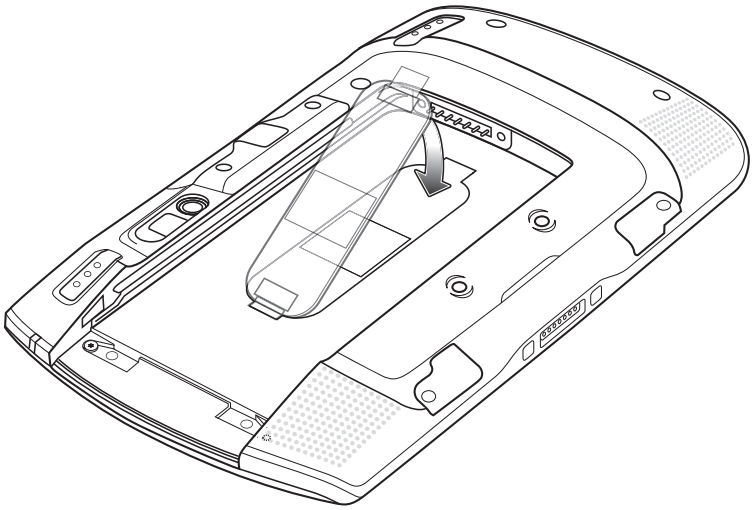


Figure 1-7 *Close Access Door*

12. Align the tracks on the side of the replacement battery with the rails in the battery compartment.
13. Push the battery in until the battery release latch snaps into place.
14. Press the Power button to turn on the ET1.

Handstrap

Use the optional 360-degree rotatable handstrap to securely hold the ET1 while working. Refer to the *ET1 Enterprise Tablet Integrator Guide* for information on installing the handstrap.

Rotate the handstrap for landscape or portrait viewing.

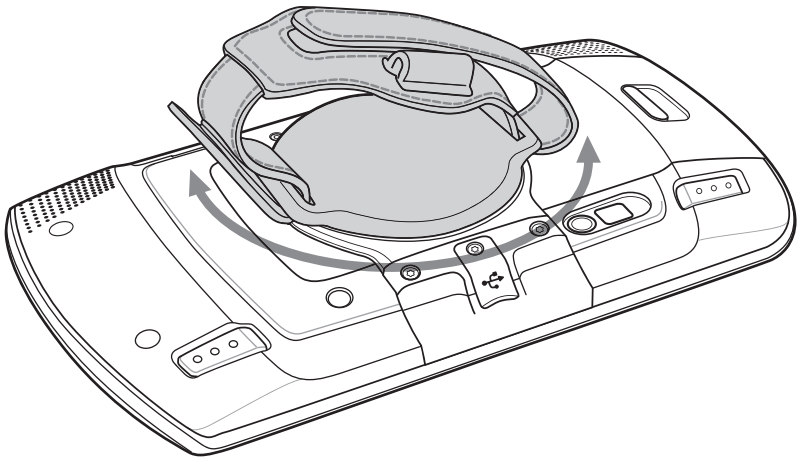


Figure 1-8 *Rotate Handstrap 360 Degrees*

Insert hand into the handstrap and tighten strap.

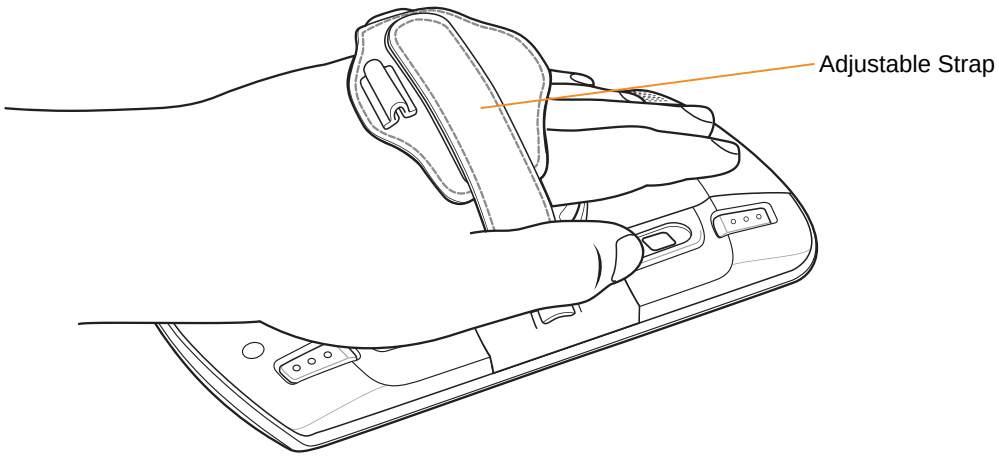


Figure 1-9 *Insert hand into Handstrap*

Battery Management

NOTE Prior to checking the battery charge level, remove the ET1 from any AC power source (cradle or cable).

To check the charge status of the main battery, touch > **Settings** > **About device** > **Status**.

Battery status indicates that the battery is discharging and **Battery level** lists the battery charge (as a percentage of fully charged).

Monitor Battery Usage

The **Battery Use** screen lists which applications consume the most battery power. Also use it to turn off applications that were downloaded if they are consuming too much power.

Touch > **Settings** > **About device** > **Battery use**.

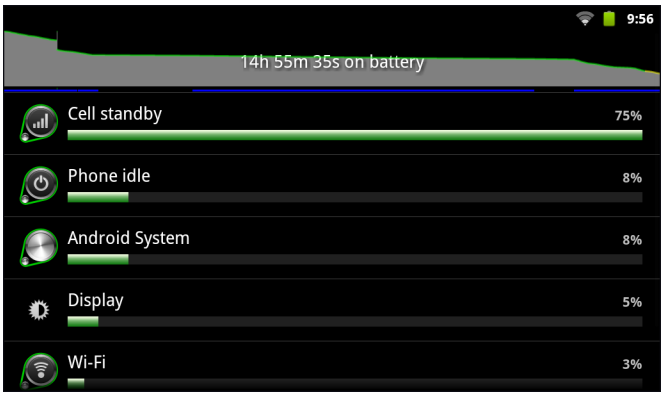


Figure 1-10 *Battery Use Screen*

The **Battery Use** screen lists the applications using the battery. The discharge graph at the top of the screen shows the rate of battery discharge since last charged (short periods of time when connected to a charger are shown as thin green lines at the bottom of the chart), and how long it has been running on battery power.

Touch an application in the **Battery Use** screen to display details about its power consumption. Different applications display different information. Some applications include buttons that open screens with settings to adjust power use.

Low Battery Notification

When the battery charge drops below 20%, the ET1 displays a notice to connect the ET1 to power.

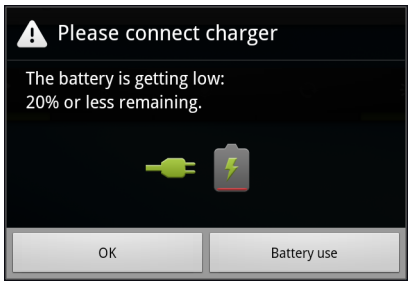


Figure 1-11 *Low Battery Notification*

The user should replace the battery or charge the ET1 using one of the charging accessories.

When the battery charge drops below 10%, the ET1 goes into critical suspend mode to save data. The screen turns off. If the Power button is pressed, the Charge LED flashes yellow.

The user must replace the battery or charge the ET1 using one of the charging accessories to retain data.

Battery Optimization

Observe the following battery saving tips:

- Leave the ET1 connected to AC power at all times when not in use.
- Set the screen to turn off after a short period of non-use.
- Reduce the screen brightness.
- Turn off all wireless radios when not in use. Note that the global positioning system (GPS) receiver is only turned on GPS application is using GPS.
- Turn off automatic syncing for Email, Calendar, Contacts, and other applications.
- Use the **Power Control** widget to check and control the status of radios, the screen brightness, and syncing.
- Minimize use of applications that keep the ET1 from suspending, for example, music, GPS and video applications.

Changing the Screen Timeout Setting

To set the ET1 to turn off after a short period of non-use:

1. Touch > **Settings** > **Display** > **Screen timeout**.
2. Select a value from the **Screen timeout** window. Options: **15 seconds**, **30 seconds**, **1 minute**, **2 minutes**, **10 minutes** or **30 minutes**.
3. Touch .

Changing the Brightness Setting

To change the brightness setting in order to conserve more battery power:

1. Touch > **Settings** > **Display** > **Brightness**.
2. If the **Automatic Brightness** checkbox is set, touch the checkbox to disable.
3. Move the slider to the left to reduce the brightness.
4. Touch **OK**.
5. Touch .

Turning Off the Radios

To turn off all radios:

1. Touch > **Settings** > **Wireless & networks**.
2. Touch the **Airplane Mode** checkbox to disable all radios. The icon appears in the Status bar.
3. Touch .

Setting the Date and Time

To set the date and time:

1. Touch **Settings** > **Date & time**.
2. Touch **Set date**.
3. Use the **+** and **-** buttons to change the month, date and year.
4. Touch **Set**.
5. Touch **Select time zone**.
6. Touch the time zone for the current location.
7. Touch **Set time**.
8. Use the **+** and **-** buttons to change the hour and minutes.
9. Touch the **AM/PM** button to change.
10. Touch **Set**.
11. Touch .

Display Setting

Screen Brightness

To set the screen brightness:

1. Touch > **Settings** > **Display** > **Brightness**. The Brightness dialog box displays.

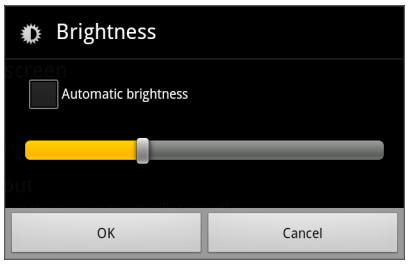


Figure 1-12 *Brightness Dialog Box*

2. Check the **Automatic brightness** checkbox to set the ET1 to automatically adjust the brightness using the built-in light sensor.

   Uncheck the checkbox to set the brightness manually. Use the slider to set a brightness level.

3. Touch **OK** > .

Screen Rotation

To set the screen rotation:

1. Touch > **Settings** > **Display**. The **Display settings** screen appears.
2. Check **Auto-rotate screen** to set the ET1 to automatically switch orientation when the ET1 is rotated. Rotate the ET1 90 degrees to the left or to the right.
3. Touch .
   - **Animation** - Opens a dialog box to set animation transition effects. Options: **No animations**, **Some animations** or **All animations**.

Screen Timeout

To set the screen timeout:

1. Touch > **Settings** > **Display** > **Screen timeout**. The **Screen timeout** menu appears.
2. Select one of the timeout values. Options: **15 seconds**, **30 seconds**, **1 minute**, **2 minutes**, **10 minutes**, or **30 minutes**,
3. Touch .

Sound Settings

Use **Sound settings** to configure media and alarm volumes. Touch > **Settings** > **Sound**.

General Sound Settings

Silent Mode - Check to silence all sounds except the audio from music, videos and alarms. Note: to silence media and alarms, go to the settings for the specific application.

Vibration - Configure the ET1 when to vibrate when it receives a notification. Options: **Always**, **Never**, **Only in Silent mode**, or **Only when not in Silent mode**.

Volume - Controls the volume of media, alarms and notifications. Use the sliders to set a volume levels.

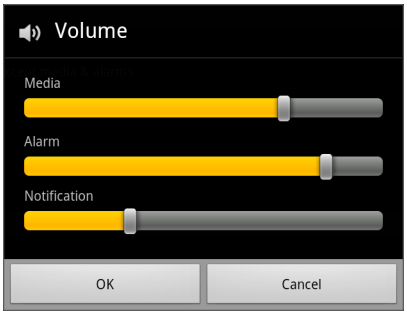


Figure 1-13 *Volume Dialog Box*

Notifications Settings

- **Notification ringtone** - Opens a dialog box to select the ringtone to sound when a notification is received.

Feedback Settings

- **Audible selection** - Check to play a sound when making screen selections.
- **Screen lock sounds** - Check to play a sound when locking and unlocking the screen.
- **Haptic feedback** - Check to have the ET1 vibrate when touching soft keys and on certain screen interactions.

CHAPTER 2 USING THE ET1

Introduction

This chapter describes the screens, status and notification icons, and controls on the ET1, and provides basic instructions for using the ET1.

Home Screen

The Home screen displays when the ET1 turns on. Depending upon the configuration, the Home screen might appear different. Contact your system administrator for more information.

After a suspend or screen time-out, the Home screen displays with the lock sliders. Slide up to un-lock the screen. For screen locking information see *Un-Locking the Screen on page 2-13*.

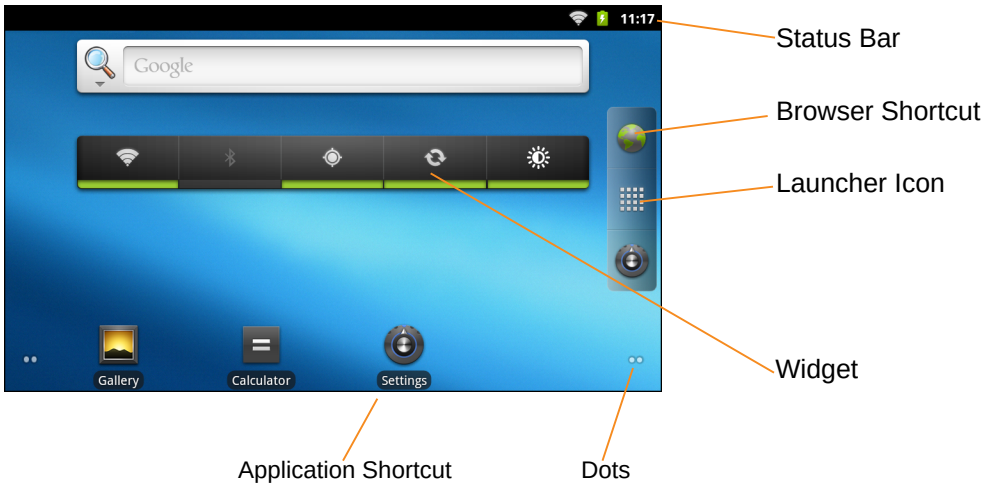


Figure 2-1 *Home Screen*

The Home screen consists of the following:

- **Status Bar** - Displays the time, status icons (right side), and notification icons (left side). For more information see *Status Icons on page 2-2* and *Managing Notifications on page 2-4*.

- **Launcher Icon** - Opens the application window. See *Applications on page 2-11*.
- **Browser Icon** - Opens the **Browser** application.
- **Widgets** - Launches stand-alone applications that run on the Home screen.
- **Shortcut Icons** - Opens applications installed on the ET1.

The Home screen provide four additional screens for placement of widgets and shortcuts. Swipe the screen left or right to view the additional screens. The dots in the lower left and right corners indicate which screen is being viewed.

Touch and hold the dots or touch and hold the (launcher icon) to view thumbnails of all the screens. Five thumbnails appear representing the five screens. Touch one of the thumbnails to view that screen.

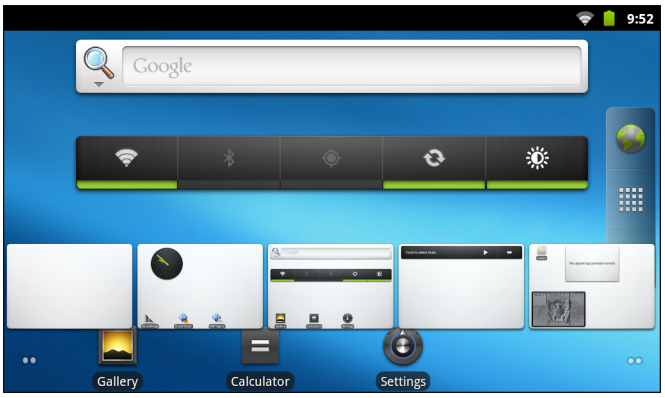


Figure 2-2 *Home Screen Thumbnails*

Status Bar

The Status bar displays the time, notification icons (left side) and status icons (right side).

Figure 2-3 *Notification and Status Icons*

If there are more notifications than can fit in the Status bar, displays indicating that more notifications exist. Open the **Notifications** panel to view all notifications and status.

Status Icons

Table 2-1 lists Status icons that may appear.

Table 2-1 *Status Icons*

Icon	Description	Icon	Description
	Indicates that GPS is on.		Indicates that the ET1 is receiving location data from GPS.
	Indicates that Bluetooth is on.		Indicates that the ET1 is connected to a Bluetooth device.
	Indicates that the Alarm is active.		Indicates that all sounds except media and alarms are silenced and vibrate mode is active.
	Indicates that the ringer is silenced.		Connected to a Wi-Fi network
	Indicates that the battery charge is very low.		Indicates that the battery charge is low.
	Indicates that the battery is partially drained.		Indicates that the battery is fully charged.
	Indicates that the battery is charging.		Indicates that the Airplane Mode is active. All radios are turned off.

Notification Icons

Table 2-2 lists the possible notification icons. See *Managing Notifications on page 2-4* for information about responding to these notifications. In addition these icons, installed applications may display their own notification icons.

Table 2-2 *Notification Icons*

Icon	Description	Icon	Description
	Indicates that more notifications are available for viewing.		Indicates that data is syncing.
	Indicates an upcoming event.		Indicates that an open Wi-Fi network is available.
	Indicates that a song is playing.		Indicates that a problem with sign-in or sync has occurred.
	Indicates that the ET1 is uploading data.		Indicates that the microSD card is almost full.
	Indicates that the ET1 is downloading data when animated and download is complete when static.		Indicates that the ET1 is connected via USB cable.

Table 2-2 *Notification Icons (Continued)*

Icon	Description	Icon	Description
	Indicates that the ET1 is connected to or disconnected from virtual private network (VPN).		Preparing SD card.
	Indicates that USB debugging is enabled on the ET1.		Indicates that the MultiUser feature is enabled.
	Indicates that a new user is logging in.		

Managing Notifications

Notification icons report the arrival of new messages, calendar events, and alarms, as well as ongoing events. When a notification occurs, an icon appears in the Status bar with a brief description. See *Table 2-2 on page 2-3*. Open the **Notifications** panel to view a list of all the notifications.

To open the Notification panel:

- drag the Status bar down from the top of the screen.

  or

- On the Home screen, touch > **Notifications**.

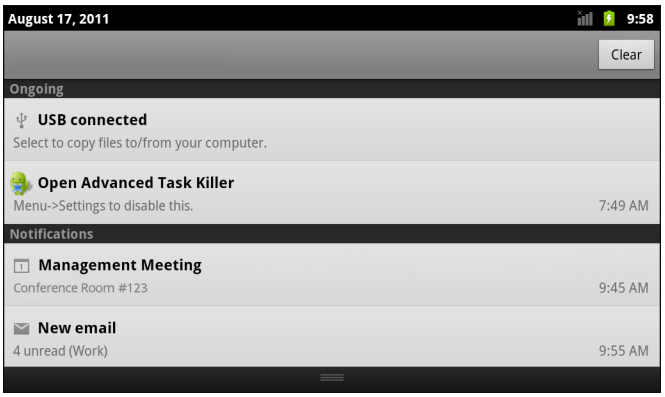


Figure 2-4 *Notification Panel*

To respond to a notification, open the Notifications Panel and then touch a notification. The Notifications Panel closes and the subsequent activity is dependent on the notification.

To clear all notifications, open the Notifications Panel and then touch **Clear**. All event-based notifications are removed. Ongoing notifications remain in the list.

To close the Notification Panel, drag the bottom of the Notifications Panel to the top of the screen or touch .

Widgets

Widgets are self-contained applications placed on the Home screen to access frequently used features.

To add a Widget to the Home screen:

1. Go to the desired Home screen.
2. Touch and hold on the screen until the **Add to Home screen** menu appears.
3. Touch **Widgets**. The **Choose widget** menu appears. *Table 2-3* lists the default widgets available.
4. Touch a widget to add it to the **Home** screen.

To remove a widget from the Home screen, touch and hold the widget icon until it enlarges and the ET1 vibrates. Drag the icon to and release.

Table 2-3 *Default Widgets*

Icon	Description	Icon	Description
	Analog Clock - Displays an analog clock on the screen.		**Calendar** - Displays a calendar on the screen. For more information, see *Chapter 8, Calendar*.
	Home screen tips - Displays Home screen tip information.		**Music** - Displays the music player control on the screen.
	Picture frame - Displays a photo from the **Gallery** on the screen.		**Power Control** - Displays the Power Control widget for controlling Wi-Fi, Bluetooth and global positioning system (GPS) connections and synchronization and brightness settings.
	Search - Displays the Search Widget for searching the web, applications and contacts.		

Shortcuts

Use Shortcuts for quick access to applications. To create a shortcut:

1. Go to the desired Home screen.
2. Touch and hold on the screen until the **Add to Home screen** menu appears.
3. Touch **Shortcuts**. The **Select shortcut** menu appears.
4. Touch a selection from the menu. Menu items vary depending upon applications installed on the ET1.
5. Follow the instructions on the screen.

To remove a shortcut from the Home screen, touch and hold the shortcut icon until it enlarges and the ET1 vibrates. Drag the icon to and release.

Folders

Use **Folders** to organize items. To add a folder:

1. Go to the desired Home screen.
2. Touch and hold on the screen until the **Add to Home screen** menu appears.
3. Touch **Folders**. The **Select folder** menu appears.

4. Touch an option:
   - **New folder -** Creates a new empty folder.
   - **All contacts** - Creates a folder containing all contacts.
   - **Bluetooth received** - Creates a folder containing a list of items received from Bluetooth.
   - **Contacts with phone numbers** - Creates a folder containing contacts with stored phone numbers.
   - **Starred contacts** - Creates a folder containing Favorite contacts.

To remove a folder from the Home screen, touch and hold the folder icon until it enlarges and the ET1 vibrates. Drag the icon to and release.

Home Screen Wallpaper

NOTE Use of Live Wallpaper may reduce battery life.

To change the Home screen wallpaper:

1. Touch > **Wallpaper**

   or

   touch and hold on the Home screen until the **Add to Home screen** menu appears then touch **Wallpapers**.
2. Touch **Gallery**, **Live wallpapers** or **Wallpapers**.
   - **Gallery** - Select to use an image stored on the ET1.
   - **Live wallpapers** - Select to use an animated wallpaper image.
   - **Wallpapers** - Select to use a wallpaper image.
3. Touch **Save** or **Set wallpaper**.

Moving Items on the Home Screen

To move an item on the Home screen:

1. Touch and hold the item until it enlarges.
2. Drag the item to a new location.

   Pause at the edge of the screen to drag the item onto an adjacent Home screen.
3. Lift finger to place item.

Removing an Item from the Home Screen

To remove an item from the Home screen:

1. Touch and hold the item until it enlarges.
2. Drag the item over .
3. When the icon turns red, lift finger. The item is removed from the Home screen.

Using the Touchscreen

Use the multi-touch sensitive screen to operate the ET1.

- **Touch** - Touch to:
  - select items on the screen
  - type letters and symbols using the on-screen keyboard
  - press on-screen buttons.
- **Touch and Hold** - Touch and hold:
  - an item on the Home screen to move it to a new location or to the trash.
  - the Launcher icon or dots on the Home screen to open the Home screen thumbnails.
  - an item in the Launcher to create a shortcut on the Home screen.
  - the Home screen to open a menu for customizing the Home screen.
  - an empty area on the Home screen until the menu appears.
- **Drag** - Touch and hold an item for a moment and then move finger on the screen until reaching the new position.
- **Swipe** - Move finger up and down or left and right on the screen to:
  - unlock the screen
  - view additional Home screens
  - view additional application icons in the Launcher window
  - view more information on an application's screen.
- **Double-tap** - Tap twice on a web page, map, or other screen to zoom in and out.
- **Pinch** - In some applications, zoom in and out by placing two fingers on the screen and pinching them together (to zoom out) or spreading them apart (to zoom in).

Working with Menus

There are two kinds of menus: options menus and context menus.

Options Menus

The Options menu contain items that apply to the activities of the current screen or application. To open the Options menu touch . Some screens have more items than can fit in the menu. Touch **More** to open a menu of additional items.

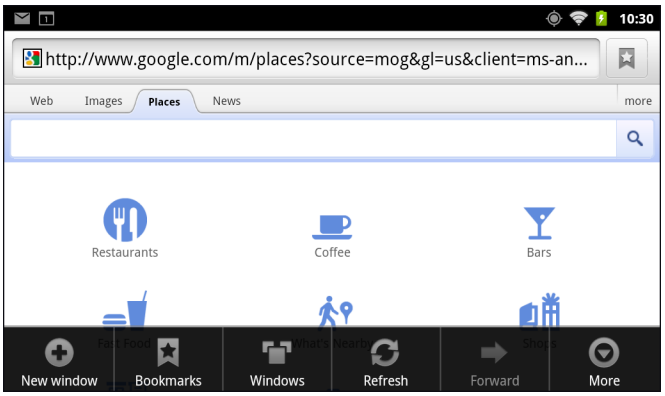


Figure 2-5 *Options Menu Example*

Context Menus

Context menus contain functions that apply to a specific item on the screen. To open a context menu, touch and hold an item on the screen.

Figure 2-6 *Context Menu Example*

Using the On-screen Keyboard

Use the on-screen keyboard to enter text in a text field. To configure the keyboard settings, touch and then select **keyboard settings**. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information.

Enter Text

To enter text:

1. Touch a text field. The on-screen keyboard appears.

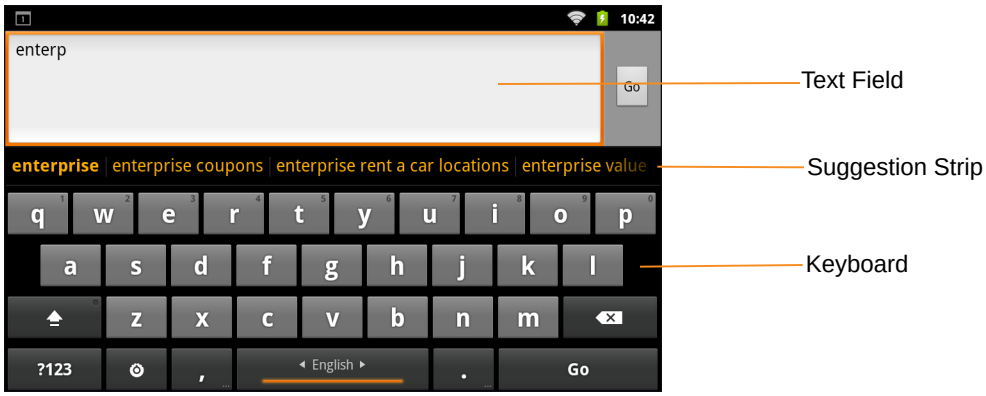


Figure 2-7 *On-screen Keyboard*

2. Touch keys on the keyboard to enter text.

   The entered text appears in the text field and in the suggestion strip. When the keyboard has a suggestion, the word is underlined in the text field and the suggestions appear in orange. The boldfaced suggestion at the left of the strip is the keyboard's best suggestion. Drag the strip to the left to view additional suggestions.

3. Press space or a punctuation mark to enter the boldfaced suggested word.

4. Touch to erase characters to the left of the cursor.

5. Touch to close the keyboard.

   View, edit, or delete the words added to the dictionary. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information.

Entering Numbers, Symbols, and Special Characters

To enter numbers and symbols:

- Touch and hold one of the top-row keys until a menu appears then select a number. Keys with alternate characters display an ellipsis (...) below the character.
- Touch and hold the **Shift** key with one finger, touch one or more capital letters or symbols to enter them, and then lift both fingers to return to the lowercase keyboard.
- Touch to switch to the numbers and symbols keyboard.
- Touch the **ALT** key on the numbers and symbols keyboard to view additional symbols.

To enter special characters, touch and hold a number or symbol key to open a menu of additional symbols.

- A larger version of the key displays briefly over the keyboard.
- Keys with alternate characters display an ellipsis (...) below the character.

Editing Text

Edit entered text and use menu commands to cut, copy, and paste text within or across applications. Some applications do not support editing some or all of the text they display; others may offer their own way to select text.

To edit text:

1. Touch the text. The on-screen keyboard appears with the text in the text field.
2. Touch the text to edit. A cursor appears with an orange tab.

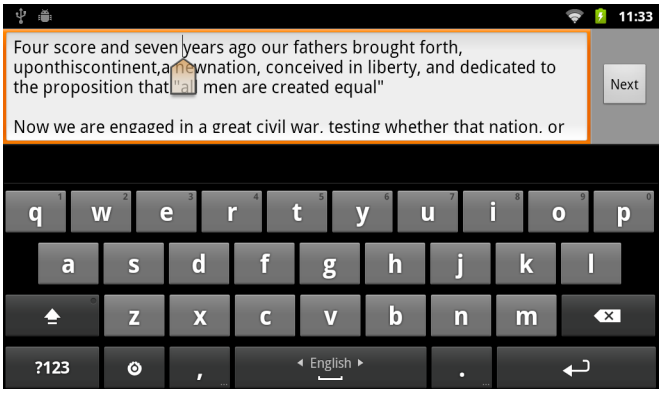

11:33
Four score and seven years ago our fathers brought forth, uponthiscontinent,a newnation, conceived in liberty, and dedicated to the proposition that "all men are created equal"
Now we are engaged in a great civil war, testing whether that nation, or
Next
?123
English

Figure 2-8 *Cursor*

3. Drag the orange tab to the location to edit text. The orange tab disappears after a few moments. To make it reappear, touch the text again.
4. Type new text or delete existing text.
5. Press ← when finished typing to close the keyboard.

Select Text

To select text to cut, copy, delete or replace:

1. Touch the text. The on-screen keyboard appears with the text in the text field.
2. Touch and hold the text to select. The **Edit text** menu appears.
3. Touch **Select word** or **Select all**.

   The selected text is highlighted in orange, with tabs at each end of the selected text.

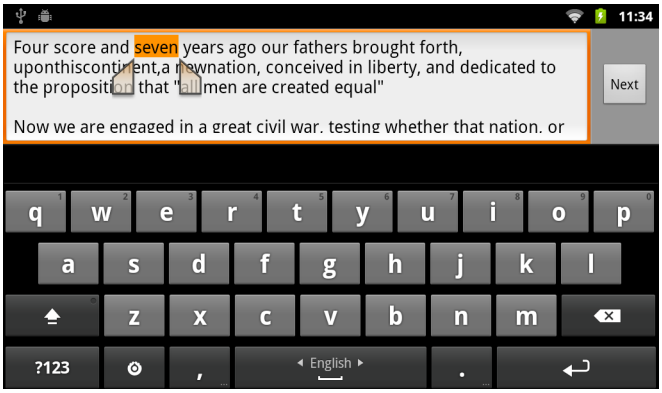

11:34
Four score and seven years ago our fathers brought forth, uponthiscontinent,a newnation, conceived in liberty, and dedicated to the proposition that "all men are created equal"
Now we are engaged in a great civil war, testing whether that nation, or
Next
?123
English

Figure 2-9 *Select Text*

4. Drag either tab to expand or reduce the selected text.
5. To delete the selected text touch the Delete key.

6. To replace the selected text, type new text to overwrite the selected text or touch the text and touch **Paste** from the **Edit text** menu.
7. To cut or copy text, touch the selected text and then touch **Cut** or **Copy** from the **Edit text** menu.

Changing the Keyboard Language

The keyboard can be set to use different language layouts. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information. To change the current keyboard language:

1. Touch and hold the spacebar.
2. Slide finger to the left or right until the language name appears in the pop-up window.

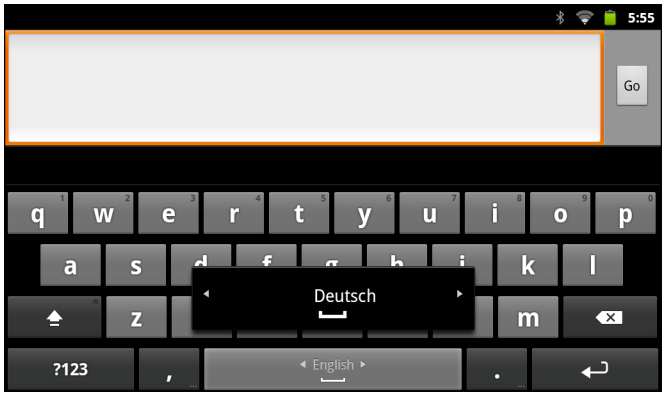


Figure 2-10 *Change Keyboard language*

3. Lift finger. The keyboard layout changes to the new language.

Applications

The **Launcher** displays icons for all installed applications. *Table 2-4* list the default applications on the ET1. Refer to the *ET1 Enterprise Tablet Integrator Guide* for information on installing and uninstalling application.

Table 2-4 *ET1 Default Applications*

Icon	Description	Icon	Description
	Browser - Use to access the internet or intranet.		**Calculator** - Provides the basic and scientific arithmetic functions.
	Calendar - Use to manage events and appointments. See *Chapter 8, Calendar* for more information.		**Camera** - Take photos or record videos. For more information see *Viewing Photos and Videos on page 6-6*.
	Clock - Use to schedule alarms for appointments or as a wake-up.		**Contacts** - Use to manage contact information.

Table 2-4 *ET1 Default Applications (Continued)*

Icon	Description	Icon	Description
	DataWedge - Enables data capture using the camera or optional scanner.		**Downloads** - lists all downloads files.
	Email - Use to send and receive email. See *Chapter 7, Email* for more information.		**FileXP** - Organize and manage files on the ET1. See *Using FileXP on page 2-17* for more information.
	Gallery - Use to view photos stored on the microSD card. For more information, see *Viewing Photos and Videos on page 6-6*.		**MSP Agent** - Enables management of the ET1 from an MSP server. Requires the purchase of an appropriate MSP client license per device to suit the level of management functionality required.
	Music - Play music stored on the microSD card.		**Rapid Deployment** - Allows the ET1 to stage a device for initial use by initiating the deployment of settings, firmware and software. Requires the purchase of an MSP client license per device.
	Search - Use the Google search engine to search the internet and the ET1.		**Settings** - Use to configure the ET1. For more information, refer to the *ET1 Enterprise Tablet Integrator Guide*.
	AppLock Administrator - Use to Use to configure the Application Lock feature. This icon appears after the optional applications is installed.		**MultiUser Administrator** - Use to configure the MultiUser feature. This icon appears after the optional applications is installed.
	Secure Storage Administrator - Use to configure the Secure Storage feature. This icon appears after the optional applications is installed.		

To open the Launcher, on the Home screen touch . The Launcher window displays.

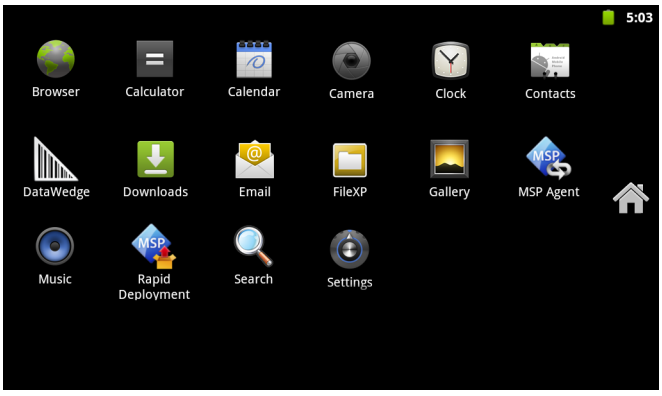


Figure 2-11 *Launcher Window*

Slide the Launcher window up or down to view more application icons. Touch an icon to open the application.

NOTE See *Shortcuts on page 2-5* for information on creating a shortcut on the Home screen.

To switch between recently used applications:

1. Touch and hold . A small window appears on the screen with icons of recently used applications.

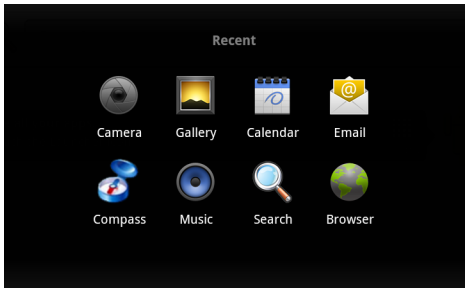


Figure 2-12 *Recently Used Applications*

2. Touch an icon to open it or press to return to the current screen.

Un-Locking the Screen

Use the Lock screen to protect access to data on the ET1. Some email account require locking the screen. Refer to the *ET1 Enterprise Tablet Integrator Guide* for information on setting up the locking feature. The Locking feature functions differently in Single User mode or Multiple User mode.

Single User Mode

When locked, a pattern, PIN or password is required to unlock the ET1. Press the Power button to lock the screen. The ET1 also locks after a pre-defined time-out.

Press and release the Power button to wake the ET1.

The Lock screen displays. Slide up to unlock the screen. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen.

If the PIN or Password screen unlock feature is enabled, enter the PIN or password after unlocking the screen.

Figure 2-13 *Lock Screen*

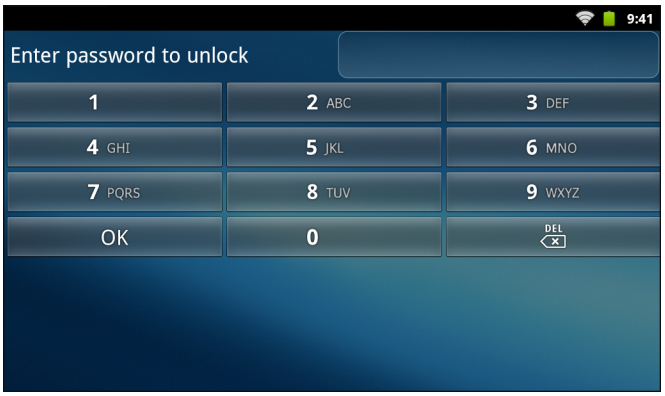


Figure 2-14 *PIN Screen*

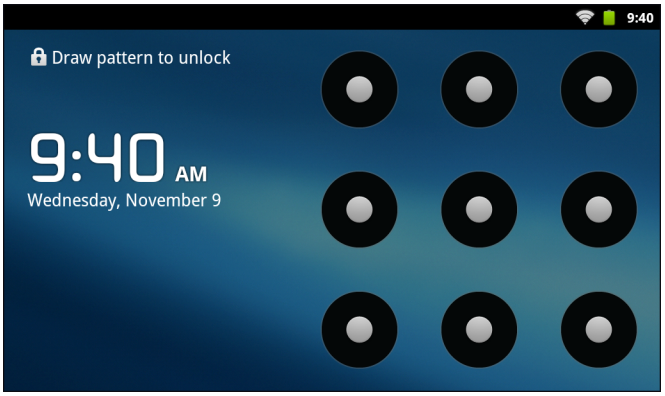


Figure 2-15 *Pattern Screen*

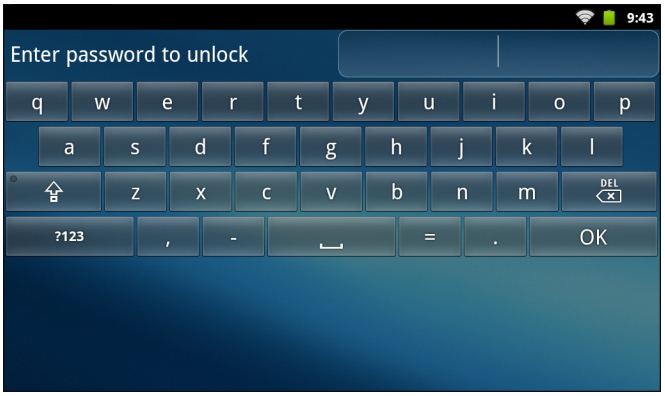


Figure 2-16 *Password Screen*

MultiUser Login

With MultiUser login, multiple users can log on to the ET1 with each user having access to various applications and features. When enabled, the Login screen appears after powering on, resetting or after the ET1 wakes from suspend mode.

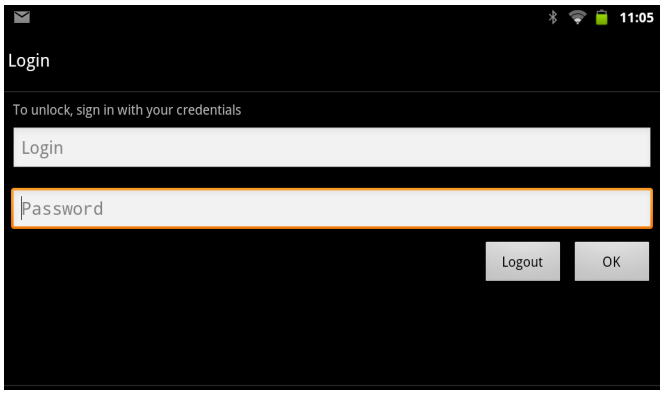


Figure 2-17 *Multiple User Log In Screen*

1. In the **Login** text field, enter the username.
2. In the **Password** text field, enter the password.
3. Touch **OK**.

After a resume from suspend, the user must enter the password.

To logout:

1. Drag the Status Bar down from the top of the screen.
2. Touch **MultiUser is active**.
3. Touch **Logout**.
4. The **Login** screen appears.

Resetting the ET1

There are two reset functions, Soft Reset and Hard Reset.

Soft Reset

Perform a Soft Reset if applications on the ET1 stop responding. To perform a Soft Reset:

1. Press and hold the Power button until the **Device options** menu appears.
2. Touch **Reset**.
3. The ET1 shuts down and then reboots.

Hard Reset

Perform a Hard Reset if the ET1 stops responding. To perform a Hard Reset, simultaneously press the Power, Left Scan/Action and Right Scan/Action buttons. The ET1 shuts down and then reboots.

Waking the ET1

The wake-up conditions define what actions wake up the ET1 after it has gone into suspend mode. The ET1 can go into suspend mode by either pressing the Power button or automatically by a time-out settings. *Table 2-5* list the default wake up conditions.

Table 2-5 *Wake-up Default Settings*

Condition for Wake-up	Power Button	Automatic Time-out
AC power is applied.	No	Yes
ET1 is inserted into a cradle.	Yes	Yes
ET1 is removed from a cradle.	No	No
ET1 is connected to a USB device.	No	Yes
ET1 is disconnected from a USB device.	No	Yes
Scan/Action button is pressed.	Yes	Yes
The screen is touched.	No	No
Bluetooth communication	Yes	Yes

Waking Up the ET1

If the ET1 is not used for a while, the screen dims and then darkens to conserve the battery.

To wake the ET1, press the Power button.

The Lock screen displays. Slide up to unlock the screen. If the Pattern screen unlock feature is enabled, the Pattern screen appears instead of the Lock screen. See *Un-Locking the Screen on page 2-13*.

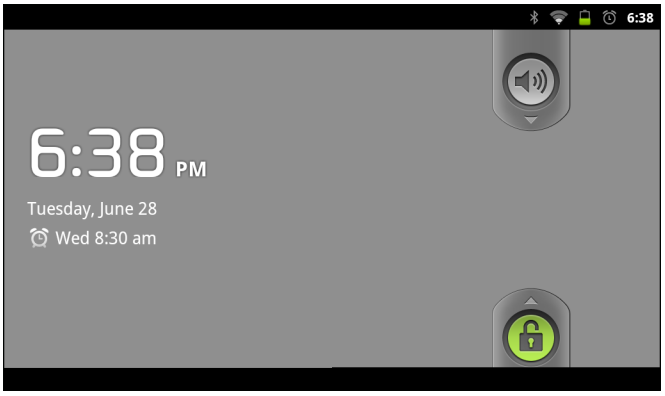


Figure 2-18 *Locked Screen*

Using FileXP

Use the **FileXP** application to view and mange files on the ET1.

To open **FileXP**, touch > **FileXP**.

Figure 2-19 *FileXP Screen*

- Touch Multiple Select icon to select multiple files/folder.
- Touch to view to the ET1 internal storage root folder.
- Touch to view the microSD card root folder.
- Touch to view the previous folder or to exit the application.
- Touch a folder icon to open the folder.
- Touch and hold an item to perform an operation on that item. Select one of the options from the menu:
  - **Information** - View detailed information about the file or folder.
  - **Move** - Move the file or folder to a new location.
  - **Copy** - Copy the select file.
  - **Delete** - Delete the selected file.
  - **Rename** - Rename the select file.
  - **Open as** - Open the selected file as a specific file type.
- Touch to view additional functions.
  - Touch > **New Folder** to create a new folder in the current folder.
  - Touch > **Search** to search for a file or folder.
  - Touch > **Sort** to sort the list by name, by type, by size or by date.
  - Touch > **Refresh** to re-display the contents of the current folder.
  - Touch > **Change View** to change the folder view from tile to list format.
  - Touch > **More** > **Change Size** to change the size of the icons: Large, Normal or Small.

Touch the Current Folder path to manually enter a path and folder name.

CHAPTER 3 DATA CAPTURE

Introduction

The ET1 offers the following data capture options:

- Capturing bar code data with integrated digital camera
- Capturing bar code data with the optional CS3070 Bluetooth laser scanner

NOTE DataWedge is installed and enabled on the ET1 by default.

Digital Camera

ET1 with an integrated camera based bar code scanning solution with the following features:

- Omnidirectional reading of a variety of bar code symbologies, including the most popular linear, postal, QR, PDF417, and 2D matrix code types.
- Cross-hair reticle for easy point-and-shoot operation.
- Picklist mode to decode a particular bar code from many in the field of view.

The solution uses the advanced camera technology to take a digital picture of a bar code, and executes state-of-the-art software decoding algorithms to extract the data from the image.

Laser Scanning

The optional CS3070 scanner has the following features:

- Reading of a variety of bar code symbologies, including the most popular linear, postal, and 1-D code types.
- Intuitive aiming for easy point-and-shoot operation.

Scanning Considerations

Typically, scanning is a simple matter of aim, scan, and decode and a few quick trial efforts master it. However, consider the following to optimize scanning performance:

- Range

  Any scanning device decodes well over a particular working range — minimum and maximum distances from the bar code. This range varies according to bar code density and scanning device optics.

  Scanning within range brings quick and constant decodes; scanning too close or too far away prevents decodes. Move the scanner closer and further away to find the right working range for the bar codes being scanned.

- Angle

  Scan angle is important for promoting quick decodes. When laser beams reflect directly back into the scanner from the bar code, this specular reflection can “blind” the scanner.

  To avoid this, scan the bar code so that the beam does not bounce directly back. But don’t scan at too sharp an angle; the scanner needs to collect scattered reflections from the scan to make a successful decode. Practice quickly shows what tolerances to work within.

- Hold the ET1 farther away for larger symbols.
- Move the ET1 closer for symbols with bars that are close together.

NOTE Scanning procedures depend on the application and ET1 configuration. An application may use different scanning procedures from the one listed above.

Bar Code Capture with Integrated Camera

To capture bar code data:

1. Ensure that an application is open on the ET1 and a text field is in focus (text cursor in text field).
2. Aim the rear-facing camera at a bar code.
3. Press and hold either Scan/Action button. By default, a preview window appears on the screen. The Decode light emitting diode (LED) lights red to indicate that data capture is in process.

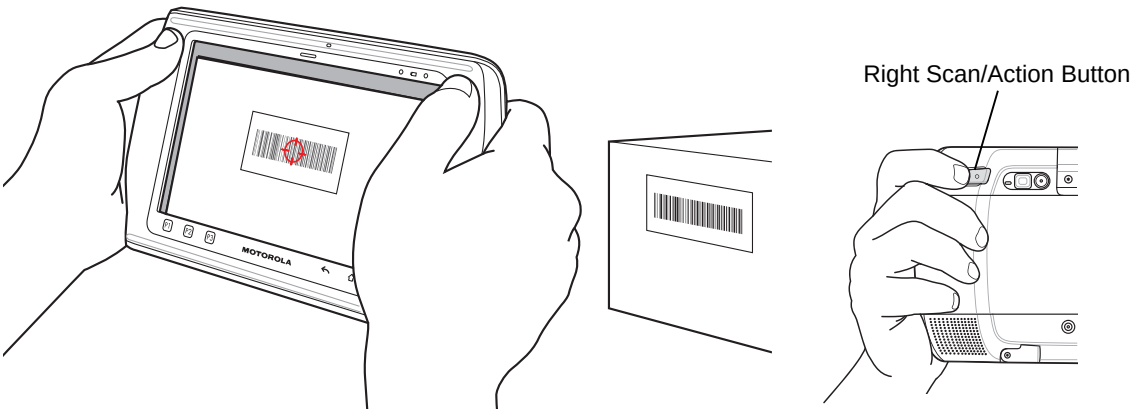


Figure 3-1 *Sample Scan Application with Preview Window*

4. Move the ET1 until the bar code is centered.

5. The Decode LED lights green and a beep sounds, by default, to indicate the bar code was decoded successfully.
6. The captured data appears in the text field.

Bar Code Capture with CS3070 Bluetooth Scanner

The CS3070 Bluetooth scanner captures bar code data, and transmits it to the ET1 via Bluetooth. The scanner supports Bluetooth human interface device (HID) connection to the ET1 where the scanner emulates a keyboard, as well as Serial Port Profile (SPP) connection where the scanner behaves as if there is a serial connection. Refer to the *ET1 Enterprise Tablet Integrator Guide* for setup and configuration information.

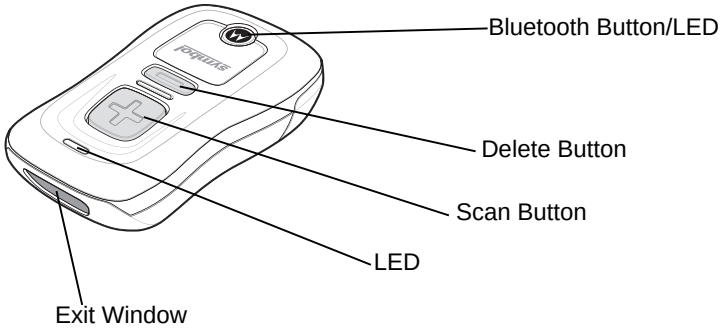


Figure 3-2 *CS3070 Bluetooth Scanner*

To capture bar code data:

1. Ensure that an application is open on the ET1 and a text field is in focus (text cursor in text field).
2. Aim the scanner at the bar code.
3. Press the scan (+) button.

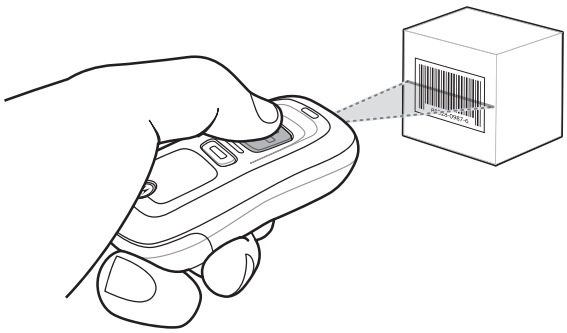


Figure 3-3 *CS3070 Scanning*

4. Ensure the scan line crosses every bar and space of the symbol.

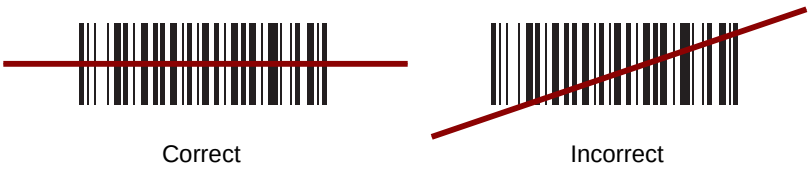


Figure 3-4 *Linear Scanner Aiming Pattern*

5. The scanner beeps and the LED turns green to indicate a successful decode.
6. The captured data appears in the text field.

DataWedge

DataWedge is a utility that adds advanced bar code scanning capability to any application without writing code. It runs in the background and handles the interface to both built-in and attached bar code scanners. The captured bar code data is converted to keystrokes and sent to the target application as if it was typed on the keypad.

Enable DataWedge

To enable DataWedge:

1. Touch > **DataWedge**. The **DataWedge Profiles** window appears.
2. Touch the profile to use.
3. Touch the **Profile enabled** checkbox. A green checkmark appears in the checkbox.
4. Touch .

Disable DataWedge

To disable DataWedge:

1. Touch > **DataWedge**. The **DataWedge Profiles** window appears.
2. Touch the profile to use.
3. Touch the **Profile enabled** checkbox. The green checkmark disappears from the checkbox.
4. Touch .

Configuration

To configure DataWedge refer to the *ET1 Enterprise Tablet Integrator Guide*.

CHAPTER 4 WLAN

Introduction

Wireless local area networks (WLANs) allow the ET1 to communicate wirelessly inside a building. Before using the ET1 on a WLAN, the facility must be set up with the required hardware to run the WLAN (sometimes known as infrastructure). The infrastructure and the ET1 must both be properly configured to enable this communication.

Refer to the documentation provided with the infrastructure (access points (APs), access ports, switches, Radius servers, etc.) for instructions on how to set up the infrastructure.

Once the infrastructure is set up to enforce the chosen WLAN security scheme, use the **Wireless & network** settings configure the ET1 to match the security scheme.

NOTE Turn off Wi-Fi when not using it, to extend the life of the battery.

The **Status** bar displays icons that indicate Wi-Fi network availability and Wi-Fi status. See *Status Bar on page 2-2* for more information.

Scan and Connect to a Wi-Fi Network

To set up WLAN on the ET1:

1. Touch > **Settings** > **Wireless & networks**.
2. Touch the **Wi-Fi** checkbox to turn Wi-Fi on.
3. Touch **Wi-Fi settings**. The ET1 searches for WLANs in the area and lists them under **Wi-Fi networks**.
4. Scroll through the list and select the desired WLAN network.
5. For open networks, touch **Connect** or for secure networks enter the required password or other credentials then touch **Connect**. See the system administrator for more information.

The ET1 obtains a network address and other required information from the network using the dynamic host configuration protocol (DHCP) protocol. To configure the ET1 with a fixed internet protocol (IP) address, Refer to the *ET1 Enterprise Tablet Integrator Guide*.

6. In the Wi-Fi setting field, **Connected to *network name*** appears indicating that the ET1 is connected to the WLAN.

CHAPTER 5 BLUETOOTH

Introduction

Bluetooth-equipped ET1 can communicate without wires, using frequency-hopping spread spectrum (FHSS) radio frequency (RF) to transmit and receive data in the 2.4 GHz Industry Scientific and Medical (ISM) band (802.15.1). Bluetooth wireless technology is specifically designed for short-range (10 meters (30 feet)) communication and low power consumption.

ET1s with Bluetooth capabilities can exchange information (e.g., files, appointments, and tasks) with other Bluetooth enabled devices such as printers, access points, and other mobile devices.

Adaptive Frequency Hopping

Adaptive Frequency Hopping (AFH) is a method of avoiding fixed frequency interferers, and can be used with Bluetooth voice. All devices in the piconet (Bluetooth network) must be AFH-capable in order for AFH to work. There is no AFH when connecting and discovering devices. Avoid making Bluetooth connections and discoveries during critical 802.11b communications. AFH for Bluetooth consists of four main sections:

- Channel Classification - A method of detecting an interference on a channel-by-channel basis, or pre-defined channel mask.
- Link Management - Coordinates and distributes the AFH information to the rest of the Bluetooth network.
- Hop Sequence Modification - Avoids interference by selectively reducing the number of hopping channels.
- Channel Maintenance - A method for periodically re-evaluating the channels.

When AFH is enabled, the Bluetooth radio “hops around” (instead of through) the 802.11b high-rate channels. AFH coexistence allows Motorola Enterprise Tablets to operate in any infrastructure.

The Bluetooth radio in this ET1 operates as a Class 2 device power class. The maximum output power is 2.5 mW and the expected range is 10 meters (32.8 feet). A definition of ranges based on power class is difficult to obtain due to power and device differences, and whether one measures open space or closed office space.

NOTE It is not recommended to perform Bluetooth wireless technology inquiry when high rate 802.11b operation is required.

Security

The current Bluetooth specification defines security at the link level. Application-level security is not specified. This allows application developers to define security mechanisms tailored to their specific need. Link-level security occurs between devices, not users, while application-level security can be implemented on a per-user basis. The Bluetooth specification defines security algorithms and procedures needed to authenticate devices, and if needed, encrypt the data flowing on the link between the devices. Device authentication is a mandatory feature of Bluetooth while link encryption is optional.

Pairing of Bluetooth devices is accomplished by creating an initialization key that is used to authenticate the devices and create a link key for them. Entering a common personal identification number (PIN) number in the devices being paired generates the initialization key. The PIN number is never sent over the air. By default, the Bluetooth stack responds with no key when a key is requested (it is up to user to respond to the key request event). Authentication of Bluetooth devices is based-upon a challenge-response transaction. Bluetooth allows for a PIN number or passkey that is used to create other 128-bit keys used for security and encryption. The encryption key is derived from the link key used to authenticate the pairing devices. Also worthy of note is the limited range and fast frequency hopping of the Bluetooth radios that makes long-distance eavesdropping difficult.

Recommendations are:

- Perform pairing in a secure environment
- Keep PIN codes private and don't store the PIN codes in the ET1
- Implement application-level security.

The ET1 supports the following Bluetooth services:

- Generic Access Profile (GAP) - Must support both Initiator and Acceptor roles
- Service Discovery Protocol (SDP) - Supports both Local Device and Remote Device.
- Serial Port Profile (SPP) - Supports both Device A and Device B roles.
- Human Interface Device Profile (HID) - Supports Host role.

Bluetooth Power States

Suspend

When there is an active Bluetooth connection, the Bluetooth radio turns off.

NOTE If there is an active Bluetooth connection between the ET1 and another Bluetooth device and there is no data activity, the ET1 will time out. However, if the user presses the Power button on the ET1, the ET1 will suspend and upon receiving data from a remote Bluetooth device, the ET1 will wake from suspend mode. For example, Bluetooth scanner sending data to the ET1.

Resume

When the ET1 resumes, Bluetooth turns on if it was on prior to suspend.

Airplane Mode

When the ET1 is placed in Airplane Mode, the Bluetooth radio turns off. When Airplane mode is disabled, the Bluetooth radio returns to the prior state.

Turning Bluetooth On and Off

Turn off the Bluetooth radio to save power or if entering an area with radio restrictions (e.g., an airplane). When the radio is off, other Bluetooth devices cannot see or connect to the ET1. Turn on the Bluetooth radio to exchange information with other Bluetooth devices (within range). Communicate only with Bluetooth radios in close proximity.

NOTE To achieve the best battery life turn off radios not in use.

Enabling Bluetooth

To enable Bluetooth:

1. Touch > **Settings** > **Wireless & networks**.
2. Touch the **Bluetooth** checkbox. A green check appears in the checkbox indicating that Bluetooth is enabled. The Bluetooth icon also appears in the Status bar.
3. Touch .

Disabling Bluetooth

To disable Bluetooth:

1. Touch > **Settings** > **Wireless & networks**.
2. Touch the **Bluetooth** checkbox. The green check disappears from the checkbox indicating that Bluetooth is disabled.
3. Touch .

Discovering Bluetooth Device(s)

The ET1 can receive information from discovered devices without pairing. However, once paired, the ET1 and a paired device exchange information automatically when the Bluetooth radio is on.

To find Bluetooth devices in the area:

1. Ensure that Bluetooth is enabled on both devices.
2. Ensure that the Bluetooth device to discover is in discoverable mode.
3. Ensure that the two devices are within 10 meters (32.8 feet) of one another.
4. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.

5. Touch **Scan for devices**. The ET1 begins searching for discoverable Bluetooth devices in the area and displays them under **Bluetooth devices**.
6. Scroll through the list and select a device. The **Bluetooth pairing request** dialog box appears.

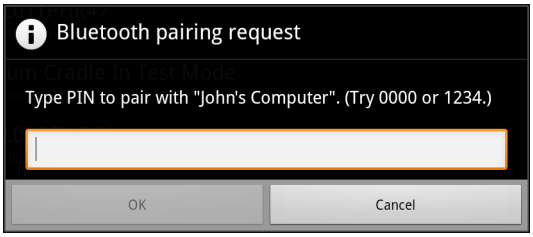


Figure 5-1 *Bluetooth Pairing - Enter PIN*

7. Enter a PIN in the text box and touch **OK**.
8. Enter the same PIN on the other device.
9. The Bluetooth device is added to the **Bluetooth devices** list and a trusted (“paired”) connection is established.

Changing the Bluetooth Name

By default, the ET1 has a generic Bluetooth name that is visible to other devices when connected. To change the Bluetooth name:

1. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.
2. If Bluetooth is not turned on, touch **Bluetooth** to turn it on.
3. Touch **Device name**. The **Device name** dialog box appears.
4. Enter a name and touch **OK**.
5. Touch .

Connect to a Bluetooth Device

Once paired, connect to a Bluetooth device:

1. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.
2. If Bluetooth is not turned on, touch **Bluetooth** to turn it on.
3. In the **Bluetooth devices** list, touch and hold on a unconnected Bluetooth device until a menu appears.
4. Touch **Connect**. When connected, the device is displayed as connected in the list.

Select Profiles on the Bluetooth Device

Some Bluetooth devices have multiple profiles. To select a profile:

1. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.

2. In the **Bluetooth devices** list, touch and hold on a Bluetooth device until a menu appears.
3. Touch **Options**. The **Connect to...** screen appears.
4. Under **Profiles**, check or uncheck a profile to allow the ET1 to use that profile.
5. Touch .

Disconnect from a Bluetooth Device

To disconnect from a Bluetooth device:

1. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.
2. In the **Bluetooth devices** list, touch and hold on a device until a menu appears.
3. Touch **Disconnect**.
4. Touch .

Unpair a Bluetooth Device

To unpair a Bluetooth device and erase all pairing information:

1. Touch > **Settings** > **Wireless & networks** > **Bluetooth settings**.
2. In the **Bluetooth devices** list, touch and hold on a device until a menu appears.
3. Touch **Unpair** or **Disconnect & unpair**.
4. Touch .

CHAPTER 6 PHOTOS AND VIDEOS

Introduction

This chapter provides information for taking photos and recording videos using the integrated digital cameras.

NOTE An installed microSD card is required to store photos and videos.

Photos and videos are stored on the micro secure digital (SD) card. To copy photos and videos to a host computer, refer to the *ET1 Enterprise Tablet Integrator Guide*.

Taking Photos

NOTE Camera settings are described in *Camera Settings on page 6-2*.

To take a photo:

1. Touch > **Camera**.

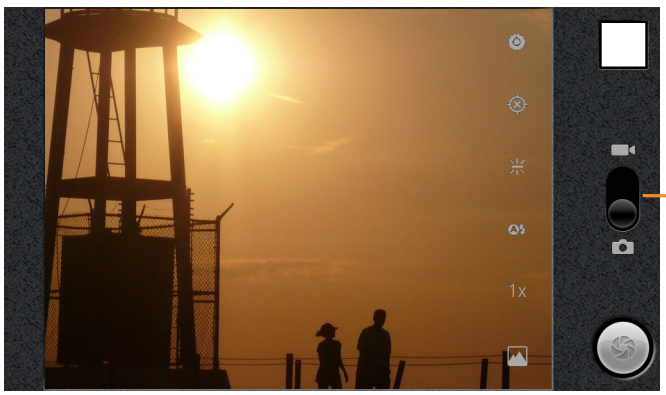


Figure 6-1 *Camera Mode*

2. If necessary, slide the Video/Camera Slider to the position.
3. Adjust exposure, flash, and other settings using the camera settings. See *Camera Settings on page 6-2* for more information.
4. Select the front or back camera. Touch the Front or Back **Select camera** icon.
5. Touch the Zoom icon **1x** and then select a zoom level.
6. Frame the subject on screen.
7. Touch the on-screen Shutter button.

   The camera brings the image into focus. When the image is in focus, the focus indicators in each corner turn green, the camera takes a photo and a shutter sound plays.

   NOTE To disable the shutter sound, touch > **Settings** > **Sounds** and enable **Silent mode**.

   Alternately, touch and hold the Shutter icon to focus first, before taking a photo; then release to take a focused photo.

   The photo appears momentarily then displays as a thumbnail in the upper right corner.
8. Touch the thumbnail to view the photo in **Gallery**. See *Viewing Photos and Videos on page 6-6*.

Camera Settings

Use the **Camera** application to control settings for photographs and videos.

1. When in Camera mode, Camera settings are displayed on screen. Touch the icon for the settings to change. The settings open over the screen.

Rear-facing Camera

- **Settings** - Touch to open a scrolling list of settings:
  - **Focus mode** - Touch to set autofocus features. Options: **Auto** (default), **Infinity**, **Macro**, **Portrait**, **Hyperfocal** or **Continuous**.
  - **Exposure** - Touch to adjust the exposure settings. Options: **+3**, **+2**, **+1**, **0** (default), **-1, -2** or **-3**.
  - **Scene mode** - Touch to select a preset combination of camera settings designed for specific scenes. Options: **Auto** (default), **Portrait**, **Landscape**, **Night**, **Night portrait**, **Theatre**, **Beach**, **Snow**, **Sunset**, **Steady photo**, **Sports** or **Party**.
  - **Picture size** - Touch to set the size (in pixels) of the photo. Options: **8M Pixels** (default), **5M Pixels**, **3M Pixels**, **2M Pixels**, **VGA** or **QVGA**.
  - **Picture quality** - Touch to set the quality of the photo. Options: **Super fine** (default), **Fine** or **Normal**.
  - **Color effect** - Touch to select special effects. Options: **None** (default), **Sepia**, **Negative**, **Solarize, Aqua, Red tint**, **Blue tint** or **Green tint**.
  - **Camera settings** - Touch **Restore defaults** to restore all camera settings to the default values.
- **Store location** - Include location information with each photo using the ET1 global positioning system (GPS).
  - **Off** - Location not stored with photo (default).

  - **On** - Location stored with photo.
- **White balance** - Touch to select how Camera adjusts colors in different kinds of light, to achieve the most natural-looking colors.
  - **Auto** - Adjust the white balance automatically (default).
  - **Incandescent** - Adjust the white balance for incandescent lighting.
  - **Daylight** - Adjust the white balance for daylight.
  - **Fluorescent** - Adjust the white balance for florescent lighting.
  - **Cloudy** - Adjust the white balance for a cloudy environment.
- **Flash mode** - Touch to set whether Rear-facing Camera relies on its light meter to decide whether a flash is necessary, or to turn it on or off for all shots.
  - **Auto** - Camera adjusts flash automatically depending upon light meter.
  - **On** - Enable flash upon taking photo.
  - **Torch** - Turn on flash.
  - **Off** - Disable flash (default).
- **Zoom** - Touch to zoom from 1x to 8x.
- **Select camera** - Touch to select the camera to use:
  - **Back** - Rear facing camera (default).
  - **Front** - Front facing camera.

Front-facing Camera

- **Settings** - Touch to open a scrolling list of settings:
  - **Scene mode** - Touch to select a preset combination of camera settings designed for specific scenes. Options: **Auto** (default), **Night** and **Night portrait**.
  - **Photo size** - Touch to set the size (in pixels) of the photo. Options: **VGA** (default) or **QVGA**.
  - **Picture quality** - Touch to set the quality of the photo. Options: **Super fine** (default), **Fine** or **Normal**.
  - **Color effect** - Touch to select special effects. Options: **None** (default), **Mono**, or **Negative**.
  - **Camera settings** - Touch **Restore defaults** to restore all camera settings to the default values.
- **Store location** - Include location information with each photo using the ET1 GPS.
  - **Off** - Location not stored with photo (default).
  - **On** - Location stored with photo.

- **Zoom** - Touch to zoom from 1x to 8x.
- **Select camera** - Touch to select the camera to use:
  - **Back** - Rear-facing camera.
  - **Front** - Front-facing camera.

Recording Videos

To record a video:

1. Touch > **Camera**.

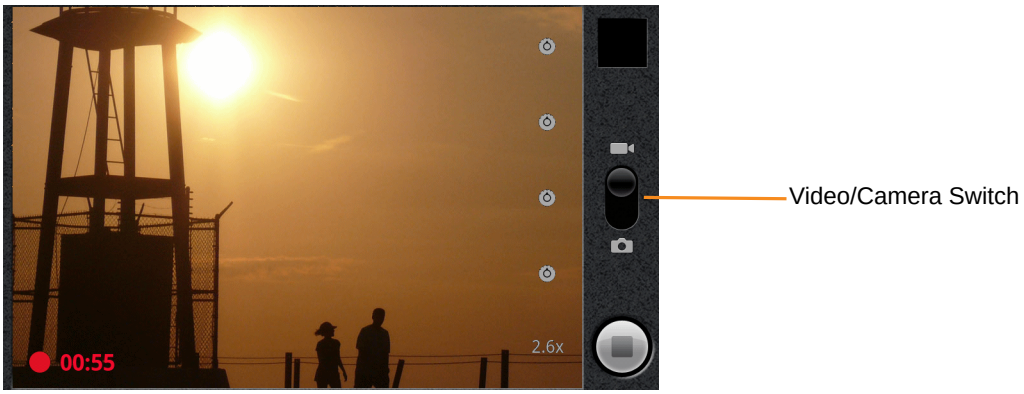


Figure 6-2 Video Mode

2. If necessary, slide the Video/Camera Slider to the position.
3. Select the camera to use and adjust the quality, color effect, flash, and other settings.
4. Point the lens and frame the scene.
5. Touch to start recording.

   The ET1 starts recording the video. The video time remaining appears in the bottom left of the screen. When less than a minute is left, the countdown turns red.
6. Touch to end recording.

NOTE Previously recorded video displays in the thumbnail at the top right.

7. Touch the thumbnail to access the **Gallery** application.

Video Settings

Rear-facing Camera

Video settings controls display on screen:

- **Settings** - Touch to open a scrolling list of settings:

  - **Color effect** - Select a special effect. Options: **None** (default), **Sepia**, **Negative**, **Solarize**, **Aqua**, **Red tint**, **Blue tint** or **Green tint**.
  - **Camera settings** -Touch **Restore defaults** to restore settings to the default values.
- **White balance** - Touch to select how the camera adjusts colors in different kinds of light, to achieve the most natural-looking colors for the video.
  - **Auto** - Adjust the white balance automatically (default).
  - **Incandescent** - Adjust the white balance for incandescent lighting.
  - **Daylight** - Adjust the white balance for daylight.
  - **Fluorescent** - Adjust the white balance for florescent lighting.
  - **Cloudy** - Adjust the white balance for a cloudy environment.
- **Flash mode** - Select to illuminate the video by turning on the camera flash.
  - **On** - Enable flash.
  - **Off** - Disable flash (default).
- **Video quality** - Touch to select video quality:
  - **High (30m)** - High quality video 30 minutes maximum in length.
  - **Low (30m)** - Low quality video 30 minutes maximum in length.
  - **MMS (Low, 30s)** - Low quality video 30 seconds maximum in length for attaching to text messages.
  - **YouTube (High, 10m)** - High quality video 10 minutes in length for posting to YouTube.
- **Select camera** - Touch to select the camera to use.
  - **Back** - Rear-facing camera.
  - **Front** - Front-facing camera.

Front-facing Camera

Video settings controls display on screen:

- **Settings** - Touch to open a scrolling list of settings:
  - **Color effect** - Select a special effect. Options: **None** (default), **Mono** or **Negative**.
  - **Camera settings** -Touch **Restore defaults** to restore settings to the default values.
- **Video quality** - Touch to select video quality:
  - **High (30m)** - High quality video 30 minutes maximum in length.
  - **Low (30m)** - Low quality video 30 minutes maximum in length.
  - **MMS (Low, 30s)** - Low quality video 30 seconds maximum in length for attaching to text messages.
  - **YouTube (High, 10m)** - High quality video 10 minutes in length for posting to YouTube.
- **Select camera** - Touch to select the camera to use.

- **Back** - Rear-facing camera.
- **Front** - Front-facing camera.

Viewing Photos and Videos

NOTE The ET1 supports the following image formats: jpeg, gif, png and bmp.

The ET1 supports the following video formats: H.263, H.264 and MPEG4 Simple Profile.

Use **Gallery** to:

- view photos
- play videos
- perform basic editing of photos
- set photos as wallpaper
- set photos as a contact photo
- share photos and videos.

To open the **Gallery** application:

- Touch > **Gallery**.
- In the **Camera** application, touch the thumbnail image at the top right.
- In the **Camera** application, touch > **Gallery**.

Gallery presents all photos and videos stored on the microSD card in albums.

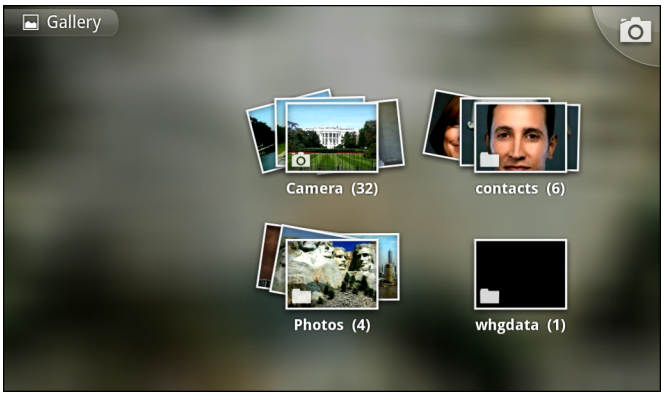


Figure 6-3 *Gallery - Albums*

- Touch an album to open it and view its contents. The photos and videos in the album are displayed in chronological order. See *Working with Albums on page 6-7*.
- Peek into an album stack by touching it with two fingers and spreading them apart.
- Touch a photo or video in an album to view it.

- Touch the Gallery icon (top left corner) to return to the main **Gallery** screen.

Working with Albums

Albums are groups of images and videos in folders. Touch an album to open it. The photos and videos are listed in a chronologically ordered grid. The name of the album displays at the top of the screen.

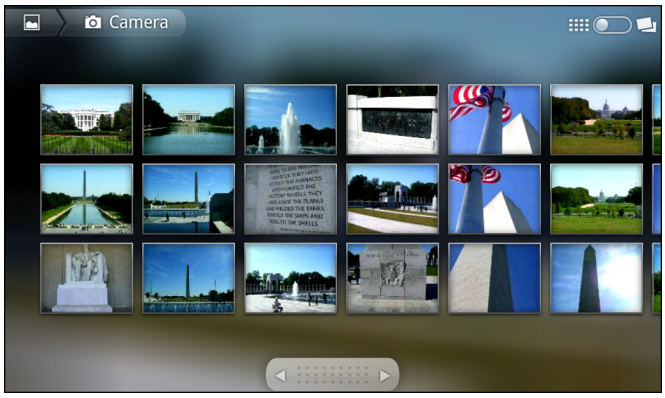


Figure 6-4 *Photos Inside an Album*

Touch an arrow in the scroll tool at the bottom of the screen to scroll images across the screen or drag the scroll tool to the left or right to scroll more or less quickly. The date of the images in view appears to scroll by date.

Swipe left or right to view more images.

Change how the contents of an album are displayed

View the photos and videos in an albums in a chronological grid or in stacks, sorted by the date and the location where they were taken. Switch album views using the Album View switch at the top right of the screen. Drag the Album View switch to the right to view the contents of the album in stacks.

Figure 6-5 *Stack View*

Drag the Album View switch to the left to view the album contents in a chronological grid.

In addition to working with whole albums and with individual photos, select one or more photos or videos in an album to work on them in batches.

1. Open the album to view the photos and videos.
2. Touch ☰ twice.

3. Check or uncheck the items to work with. Uncheck all items checked by touching **Deselect All** at the top right of the window.
4. Use the controls at the bottom of the screen to share, delete or get detail information.

Share an Album

To share the entire contents of one or more albums:

1. Touch > **Gallery**.
2. Touch twice.
3. Check or uncheck the albums to share.
4. Touch **Share**. The Share menu opens. Touch the application to use to share the selected albums.
5. Follow the instructions within the selected application.

Get Album Information

To get information for an album:

1. Touch > **Gallery**.
2. Touch twice.
3. Check an album.
4. Touch **More**. The More menu displays. Touch **Details**.

Delete an Album

To delete an album and its contents from the microSD card:

1. Touch > **Gallery**.
2. Touch twice.
3. Check an albums to delete.Ensure that other albums are unchecked.
4. Touch **Delete**. The Delete menu displays.
5. Touch **Confirm Delete** to delete the album.

Working with Photos

Use **Gallery** to view photos on the microSD card and edit and share photos.

View and Browse Photos

To view a photo:

1. Touch > **Gallery**.
2. Touch an album to open it.
3. Touch a photo.

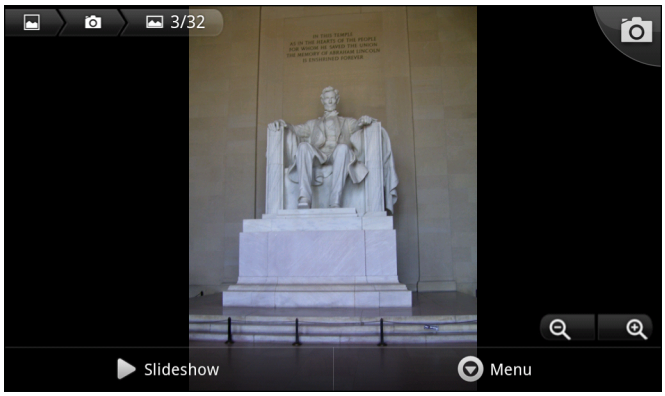


Figure 6-6 *Photo Example*

Drag left or right to view the next or previous photo in the album.

- Turn the ET1 to view the photo in upright (portrait) or sideways (landscape) orientation. The photo is displayed (but not saved) in the new orientation.

Touch the photo to view the controls.

Double-tap the screen to zoom in or pinch two fingers together or spread them apart to zoom in or out.

Drag the photo to view parts that are not in view.

Slideshow

To view a slideshow:

1. Touch a photo to view the controls.
2. Touch **Slideshow**. The photos in the album display.
3. Touch a photo to end the slideshow.

Rotate a Photo

To rotate a photo:

1. Touch a photo to view the controls.
2. Touch **Menu** > **More**. The More menu appears.
3. Touch **Rotate Left** or **Rotate Right**. The photo is automatically saved with the new orientation.

Crop a Photo

To crop a photo:

1. Touch a photo to view the controls.
2. Touch **Menu** > **More**.
3. Touch **Crop**. The orange cropping tool appears.
4. Use the cropping tool to select the portion of the photo to crop.
   - Drag from the inside of the cropping tool to move it.
   - Drag an edge of the cropping tool to resize it to any proportion.

- Drag a corner of the cropping tool to resize it with fixed proportions.

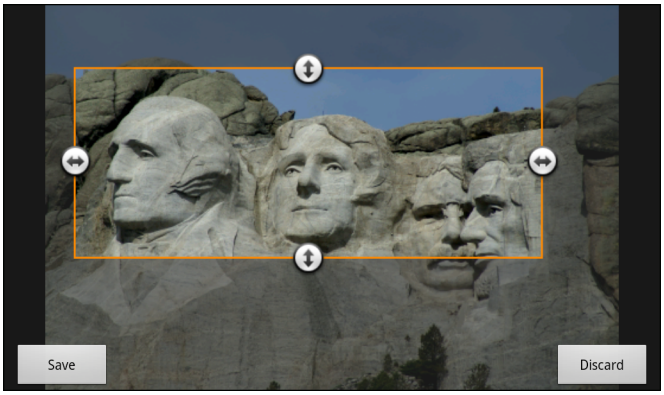


Figure 6-7 *Cropping Tool*

5. Touch **Save** to save a copy of the cropped photo. The original version is retained.

Use a Photo as a Contact Icon

To use a photo as a contact icon:

1. Touch the photo to view the controls.
2. Touch **Menu** > **More** > **Set as**.
3. Touch **Contact icon**. A list of contacts displays.
4. Touch a contact.
5. Touch the orange box and crop the photo accordingly.
6. Touch **Save**.

Set a Photo as Wallpaper

To use a photo as wallpaper:

1. Touch the photo to view the controls.
2. Touch **Menu** > **More** > **Set as**.
3. Touch **Contact icon**. A list of contacts displays.
4. Touch a contact.
5. Touch the orange box and crop the photo accordingly.
6. Touch **Save**.

Get Photo Information

To get information about a photo:

1. Touch the photo to view the controls.
2. Touch **Menu** > **More**. The More menu appears.
3. Touch **Details**.

Share a Photo

To share a photo:

1. Touch a photo to view the controls.
2. Touch **Menu** > **Share**. The Share menu appears.
3. Touch the application to use to share the selected photo.

   The application selected opens with the photo attached to a new message.

Delete a Photo

To delete a photo:

1. Touch a photo to view the controls.
2. Touch **Menu** > **Delete**. The Delete menu displays.
3. Touch **Confirm Delete** to delete the photo.

Working with Videos

Use **Gallery** to play videos stored on the microSD card.

To play a video:

1. Touch > **Gallery**.
2. Open a Gallery album and touch a video.
3. The video plays.

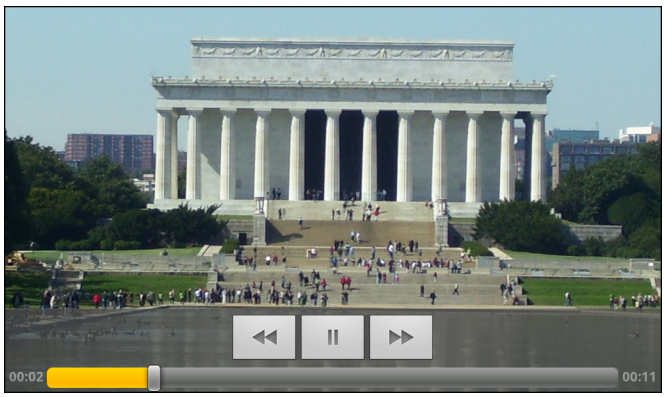


Figure 6-8 *Playing Video*

Touch the screen to view the playback controls.

Send Video in an Email

To send a video using Email:

1. While viewing an album, touch twice.
2. Check the videos to share.
3. Touch **Share**.

4. In the Share menu, touch **Email**. Email opens with the video attached to a new message.

Delete a Video

To delete a video:

1. While viewing an album, touch twice.
2. Check the videos to delete.
3. Touch **Delete**.
4. Touch **Confirm Delete**.

CHAPTER 7 EMAIL

Introduction

Use the **Email** application to send and receive emails from Post Office Protocol version 3 (POP3), internet message access protocol (IMAP) and Microsoft Exchange accounts.

Opening Email

To open **Email**, touch > **Email**. **Email** opens to the last screen view or it displays the contents of the Inbox (one email account) or the Accounts screen (multiple accounts).

If it is the first time opening Email, the setup wizard opens to assist adding an email account. See *Adding an Email Account on page 7-5*.

Accounts Screen

The **Accounts** screen displays the **Combined Inbox** and each email account as well as **Starred**, **Draft** or **Unsent** folders.

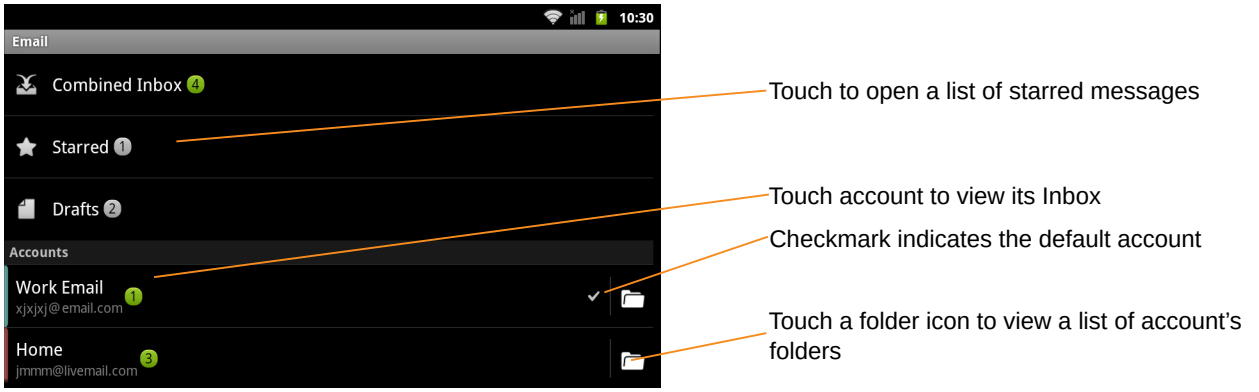


Figure 7-1 *Accounts Screen*

Each folder and account on the Accounts screen displays the number of unread messages in green or the total number of messages in gray.

Combined Inbox

To view Email messages from all accounts, touch **Combined Inbox**. The **Combined Inbox** screen displays.

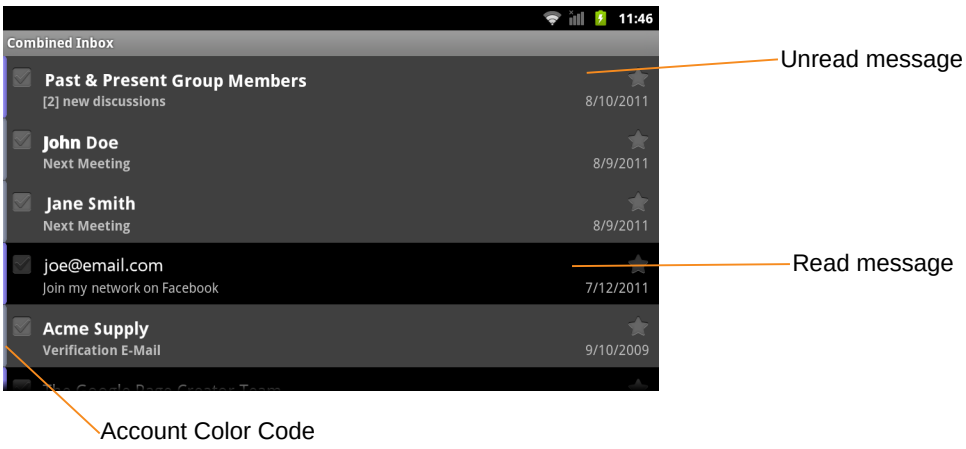


Figure 7-2 *Combined Inbox Window*

Messages in the **Combined Inbox** are color coded along their left side, by account, using the same colors that are used to color code accounts in the **Accounts** screen.

Not all emails are downloaded. To download older messages from IMAP or POP3 accounts, touch **Load more messages** at the bottom of the list.

Inbox

To view messages from one account, touch the account name under **Accounts**. The **Inbox** screen displays.

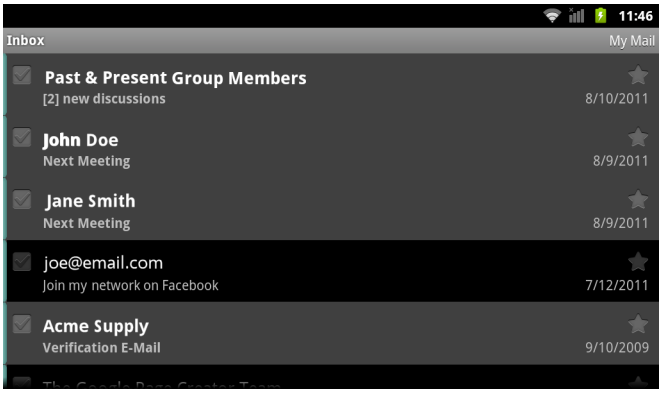


Figure 7-3 *Inbox Window*

Reading Email Messages

Read Email messages in the **Combined Inbox** or in the specific account **Inbox**.

NOTE When a new Email message is received, a notification appears in the Status bar. Touch the Email notification to view the Email in the **Combined Inbox**.

To read an email:

1. Open the **Combined Inbox**, an account's **Inbox**, or another message folder.
2. Touch the Email message to open it.

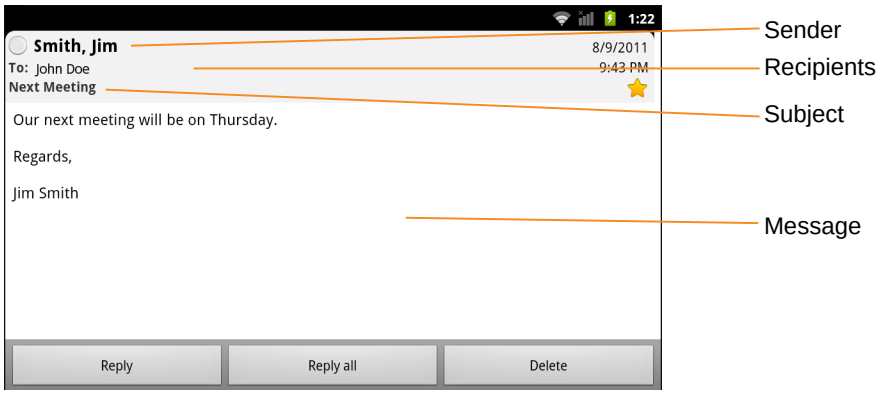


Figure 7-4 *Email Message Screen*

3. Touch **Reply** to reply to the sender of the message.
4. Touch **Reply all** to reply to all recipients of the message.
5. Touch **Delete** to delete the message.

Emails can contain attachments that can be viewed with other applications. To view an attachment:

1. Scroll to the bottom of the email message.
2. Touch **Open** or **View** button.

Reply to an Email

To relay to a message:

1. While reading a message, touch **Reply** or **Reply all**.

   or

   Touch > **Reply**, **Reply all** or **Forward**.
2. Enter a message in the message field.
3. Touch **Send**.

Marking a Message as Unread

To set a message back to unread:

1. Open the Email message.
2. Touch > **Mark as unread**. The Email message closes.

Deleting a Message

To delete a message:

1. Open the Email message.
2. Touch **Delete**. The Email message is deleted and the next message appears.

Flagging Important Messages

To flag messages while reading them:

1. Open the Email message.
2. Touch the Star icon. The icon turns gold.
3. Touch to close the message.

While viewing a list of messages in a folder, touch a message's star. The star turns gold.

Working with Message in Batches

To delete, star, or mark unread a batch of messages:

1. In the Inbox or mailbox, check the messages to work with as a batch. When one or more messages are checked, the **Mark unread**, **Add star**, and **Delete** buttons appear at the bottom of the screen.
2. Touch **Mark unread**, **Add star**, or **Delete**. Touch and touch **Deselect all**. The action affects the entire batch of messages.

Composing and Sending a Message

To send an Email message:

1. From the **Inbox**, touch > **Compose**.
2. In the **To** field, enter a contact address. As text is entered, matching addresses from Contacts display. Touch a suggested address or enter a new one. Separate multiple addresses with commas.
3. Touch > **Add Cc/Bcc** to address a copy or blind copy of the message.
4. In the **Subject** field, enter a subject for the message.
5. In the message field, enter the text of the message.
6. To attach a file, touch > **Add attachment**.
7. Touch **Send** or touch **Save as draft** to save it in a **Drafts** folder.

NOTE If the ET1 is not connected to a network, the messages is stored in the **Outbox** folder until connected to a network.

Working with Account Folders

Each account has an Inbox, Outbox, Sent, and Drafts folders. Depending on the features supported by the account's service provider, additional folders may appear.

To view folders:

1. Open the **Accounts** screen.
2. Touch an account's folder icon.
3. The account's **Folders** screen opens, with a list of the folders in the account. Touch a folder to view a list of the messages in the folder.

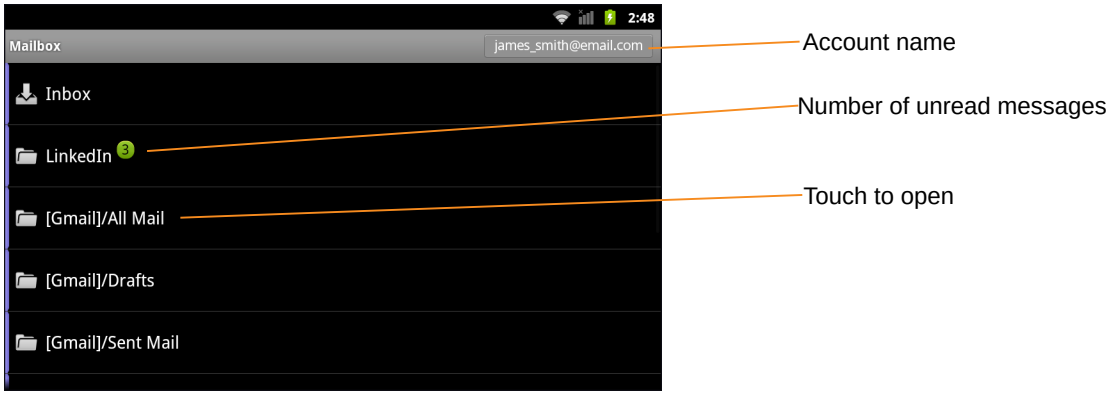


Figure 7-5 *Account Folders Window*

Setting an Email Signature

A Signature is text that is automatically added to the end of outgoing emails. Add one or more lines of text to every message.

To add a signature:

1. Open the Accounts screen.
2. Touch and hold the account until the menu appears.
3. Touch **Account settings**.
4. Touch **Signature**.
5. Enter a signature.
6. Touch **OK**.
7. Touch .

Adding an Email Account

The first time opening the **Email application**, set up at least one email account. Multiple accounts can be added.

The accounts that were configured are displayed in the Accounts screen.

The Email setup wizard helps set up the account for many popular email systems, including those based on IMAP and POP3. If the service provider requires additional settings, or if the service provider is unknown to **Email**, enter the necessary details manually.

Adding an Exchange Email Account

Set up an a Microsoft Exchange ActiveSync account (Exchange 2003 and 2007), to read and work with the same email as on a computer using Microsoft Outlook. Email supports username and password authentication for Exchange ActiveSync accounts, and the IT administrator may set additional security policies for the account (contact the IT administrator for more information).

To add an Exchange Email account:

1. Touch > **Email**.
2. In the **Email address** field, enter the account email address.
3. In the **Password** field, enter the account password.
4. Touch **Next**. To manually setup the account touch **Manual**.
5. Touch **Exchange**. The **Server settings** window appears.
6. In the **Domain/Username** filed,
7. In the Password field,
8. In the **Server** field, enter or edit the account server address.
9. Check or uncheck the **Use secure connection (SSL)** checkbox.
10. Check or uncheck the **Accept all SSL certificates** checkbox.
11. Touch **Next**.
12. Some Exchange server require additional security features. Touch **OK**.
13. In the **Inbox checking frequency** drop-down list, select how often Email checks for new messages.
14. In the **Amount to synchronize** drop-down list, select how many days or weeks of emails to store on the ET1.
15. Select the **Send email from this account by default** checkbox to set this account to be the default for sending emails.
16. Select the **Notify me when email arrives** checkbox to provide a notification when a email arrives.
17. Select the **Sync contacts from this account** checkbox to synchronize contacts on the ET1 with the account.
18. Select the **Sync calendar from this account** checkbox to synchronize calendar on the ET1 with the account.
19. Touch **Next**.
20. In the **Give this account a name (optional) field, enter a name for the Email account.**
21. Touch **Done**.
22. If server requires remote control a window appears.
23. Touch **Activate**.

Adding an POP3/IMAP Email Account

When setting up an IMAP or POP account, the ET1 may be able to retrieve account settings automatically, or the user may need to enter certain settings manually.

Automatic Setup

To add an POP3/IMAP Email account:

1. Touch > **Email**.
2. > **Add account**.
3. In the **Email address** field, enter the account email address.
4. In the **Password** field, enter the account password.
5. Touch **Next**. **Email** attempts to communicate with the email service provider to validate the account for sending and receiving mail, using just the email address and password. This is sufficient for most email services.
6. Touch **OK**. The **set up email window** appears.
7. In the **Give this account a name (optional)** field, enter a name for the Email account.
8. In the **Your name (displayed on outgoing messages)** field, enter a name that appears on outgoing messages.
9. Touch **Done**.

Manual Setup

To add an POP3/IMAP Email account:

1. Touch > **Email**.
2. Touch > **Add account**.
3. In the **Email address** field, enter the account email address.
4. In the **Password** field, enter the account password.
5. Touch **Next**. To manually setup the account touch **Manual**.
6. Touch **POP3/IMAP**. The **Incoming server settings** window appears.
7. In the **Username** field, edit the account username.
8. In the **Password** field, edit or enter the account password.
9. In the **POP3 server** field, edit enter the POP3/IMAP server address.
10. In the **Port** field, edit or enter the port number.
11. In the **Security type** drop-down list, select the security type.
12. In the **Delete email from server** drop-down list, select whether the email message is deleted from the server or not.
13. Touch **Next**. The **Outgoing server settings** window appears.

14. In the **SMTP server** field, edit or enter the simple mail transfer protocol (SMTP) server address.
15. In the **Port** field, edit or enter the port number.
16. In the **Security type** drop-down list, select the required security type.
17. Check the **Require sign-in** checkbox if the service provider requires the username and password to be entered before sending an email.
18. In the **username** field, edit or enter the account username.
19. In the **Password** field, edit or enter the account password.
20. Touch **Next**. The **Account options** window appears.
21. In the **Inbox checking frequency** drop-down list, select how often Email checks for new messages.
22. Select the **Send email from this account by default** checkbox to set this account to be the default for sending emails.
23. Select the **Notify me when email arrives** checkbox to provide a notification when a email arrives.
24. Touch **Next**. The **Set up email** window appears.
25. In the **Give this account a name (optional)** field, enter a name for the Email account.
26. In the **Your name (displayed on outgoing messages)** field, enter a name that appears on outgoing messages.
27. Touch **Done**.

Change Account Settings

To change account settings:

Touch > **Email**.

- From the **Combined Inbox** touch and hold an account name until the menu appears. Touch **Account settings**.
- From an account **Inbox** touch > **Account settings**.

Account Settings

To configure an Email account, touch > **Email** > > **Account settings**.

- **General settings**
  - **Account name** - Opens a dialog box to enter the account name as it appears in the **Accounts** and **Folders** screens.
  - **Your name** - Opens a dialog box to enter the user's name as it appears to others when they receive an email.
  - **Signature** - Opens a dialog box to enter a signature to append to the messages from this account.
  - **Inbox check frequency** - Opens a dialog box to set how often Email checks for new email sent to this account. Options: **Never**, **Every 5 minutes**, **Every 10 minutes**, **Every 15 minutes**, **Every 30 minutes** or **Every hour**.
  - **Default account** - Use this account's outgoing email server for the emails when not currently viewing or working with emails from a specific account.
  - **Amount to synchronize** - For Exchange ActiveSync accounts, opens a dialog to set how man days or weeks of email to store.
- **Notification settings**
  - **Email notifications** - Set whether to receive notifications when new email is received.
  - **Select ringtone** - Opens a dialog box to select a ringtone to sound when an email notification is received.
  - **Vibrate** - Opens a dialog to set the ET1 to vibrate whenever an email notification is received for this account. Options: **Always**, **Only when silent** or **never**.
- **Server settings**
  - **Incoming settings** - Opens a screen to configure settings for how the ET1 receives email for this account. See *Incoming Server Settings on page 7-9*.
  - **Sync contacts** - For accounts that can sync contacts, check to sync contacts from this account.
  - **Sync calendar** - For accounts that can sync calendars, check to sync calendar events from this account.
  - **Outgoing settings** - Opens a screen to configure settings for how the ET1 sends email from this account. (Microsoft Exchange ActiveSync accounts do not have separate outgoing server settings.) See *Outgoing Server Settings on page 7-10*.

Incoming Server Settings

Account incoming settings vary depending on the type email service: Exchange ActiveSync, IMAP or POP3.

Microsoft Exchange ActiveSync

- **Server settings**
  - **Domain\Username** - If the Exchange ActiveSync server requires a specific a domain, enter it before the backslash. Otherwise, just enter the username (the part before the @example.com in the email address) after the backslash. (The backslash is optional if entering the username; **Email** enters the correct syntax for domains and usernames when communicating with the server.)
  - **Password** - The password for the email account.
  - **Server** - The hostname of the Exchange ActiveSync server.
  - **Use secure connection (SSL)** - Check this option if the Exchange ActiveSync server requires a secure connection to the server.
  - **Accept all SSL certificates** - Check this option to accept a server certificate from the Exchange ActiveSync server that is self-signed, out of date, or in some other way not accepted by the Email application.

IMAP

- **Username** - Depending on the requirements of the email service provider, the user full email address or username.
- **Password** - The password for the email account.
  - **IMAP server** - The domain name of the email service provider's IMAP server.
  - **Port** - Set the Security type first to enter the typical server port number in this field automatically. Or enter a different port number if the email service provider requires it.
  - **Security type** - Select the security type required by the email service provider. Select the (Accept all certificates) option for the security type to accept a server certificate from the IMAP server that is self-signed, out of date, or in some other way not accepted by the Email application.
  - **IMAP path prefix**- Leave blank unless instructed to enter a specific prefix by the email service provider.

POP3

- **Username** - Depending on the requirements of the email service provider, the user full email address or username.
- **Password** - The password for the email account.
- **POP3 server** - The domain name of the email service provider's POP3 server.
- **Port** - Set the Security type first to enter the typical server port number in this field automatically. Or enter a different port number if the email service provider requires it.
- **Security type** - Select the security type required by the email service provider. Select the (Accept all certificates) option for the security type to accept a server certificate from the POP3 server that is self-signed, out of date, or in some other way not accepted by the Email application.
- **Delete email from server** - Use to configure Email to cause the email service provider to delete from its server any email deleted in **Email**, or to never delete email from the server.

Outgoing Server Settings

If using an IMAP or POP3 account for receiving email, it typically uses an SMTP server to send email from that account.

NOTE Microsoft Exchange ActiveSync accounts do not have separate outgoing server settings.

- **SMTP server** - The domain name of the email service provider's SMTP server.
- **Port** - Set the Security type first to enter the typical server port number in this field automatically. Or enter a different port number if the email service provider requires it.
- **Security type** - Select the security type required by the email service provider. Options: **None**, **SSL**, **SSl (Accept all certificates)**, **TLS** or **TLS (Accept all certificates)**. Select the (Accept all certificates) option to accept a server certificate from the SMTP server that is self-signed, out of date, or in some other way not accepted by the Email application.
- **Require sign-in** - Check this option to enter a username and password for the SMTP server, if the email service provider requires them to send email.
- **Username** - Account username on the SMTP server (this may not be the same as the username on the POP3 or IMAP server for incoming mail). Visible only if Require sign-in is checked.
- **Password** - Account password on the SMTP server (this may not be the same as the username on the POP3 or IMAP server for incoming mail). Visible only if Require sign-in is checked.

Deleting an Email Account

To delete an Email account:

1. Touch > **Email**.
2. Touch > **Accounts**. The **Accounts** screen appears.
3. Touch and hold the account to delete. An account menu appears.
4. Touch **Remove account**.
5. Touch **OK** in the dialog box to confirm.

CHAPTER 8 CALENDAR

Introduction

Use the **Calendar** application to schedule and manage events, meetings, and appointments.

To open **Calendar**, touch > **Calendar**.

Events from each account added to the ET1 and configured to synchronize calendars is displayed in Calendar. Events from each calendar are displayed in different colors.Calendar shows the current time (the red marker and horizontal line in some views) and the time for events using the local time zone by default.

To change the **Calendar** view, touch > **Agenda**, **Day**, **Week**, or **Month**. Each view displays the events the calendar for the period of time specified.

- To view more information about an event in Agenda view, touch the event.
- To view the events of a day in Month view, touch a day.

Agenda View

Agenda view is a list of events in chronological order. All-day and multi-day events are listed at the start of each day. Days without events are not shown.

1. To switch to Agenda view touch > **Agenda**.

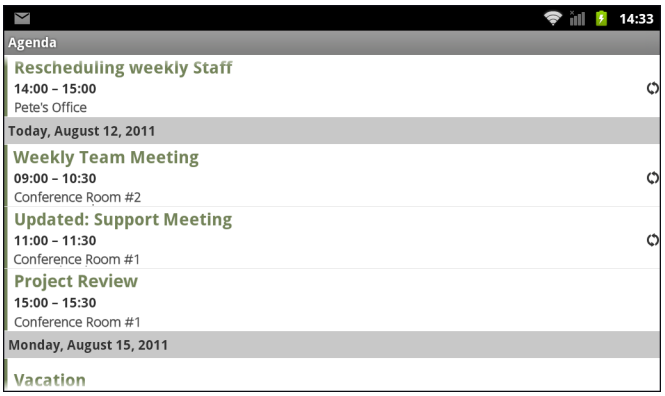


Figure 8-1 *Agenda View*

2. Touch an event to view information about that event.
3. Touch ↩ to return to Agenda view.

Day View

Day view displays a chart of the events for one day. A red line indicates the current time. All-day and multi-day events are displayed at the top. The title of each event is displayed in the rows that correspond to when it occurs.

To switch to Day view touch **Menu** > **Day**.

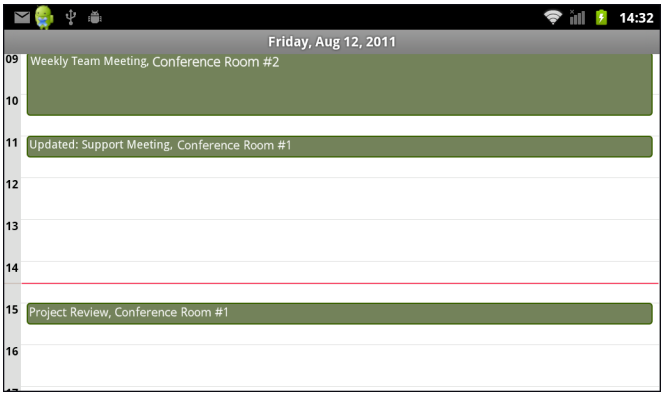


Figure 8-2 *Day View*

- Swipe right or left to view the previous or next days.
- Touch an event to view information about the event.
- Touch and hold an empty spot and then touch **New event** to create a new event. See *Creating an Event on page 8-4* for more information.
- Touch and hold an event and then touch **Delete event** to delete the event.

Week View

Week view displays a chart of the events for one week. All-day and multi-day events are displayed at the top.

To switch to Week view touch **Menu** > **Week**.

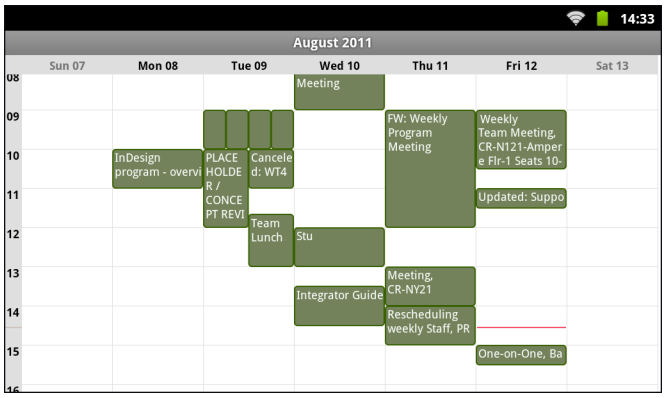


Figure 8-3 *Week View*

- Touch an event to view information about the event.
- Touch and hold an empty spot and then touch **New event** to create a new event. See *Creating an Event on page 8-4* for more information.
- Touch and hold an event and then touch **Delete event** to delete the event.

Month View

Month view displays a chart of the events for the month. Segments of each day with scheduled events are blue in the day's vertical bar.

To switch to Month view touch **Menu** > **Month**.

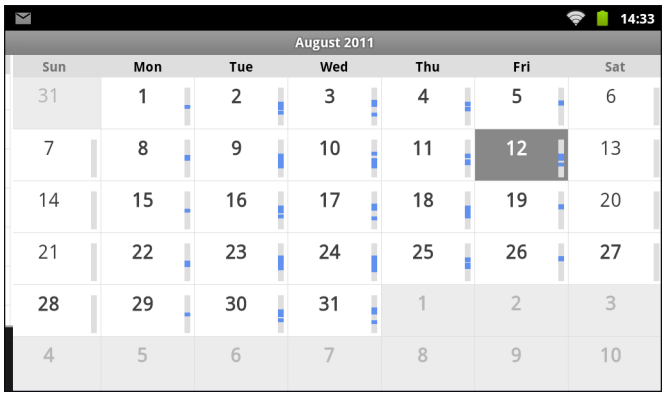


Figure 8-4 *Moth View*

- Touch a day to view its events in Day view.

Viewing Event Details

To view information about an event:

- In Agenda, Day, or Week view, touch an event to view the event information.

- In Month view, touch a day to switch to Day view. Then touch an event.

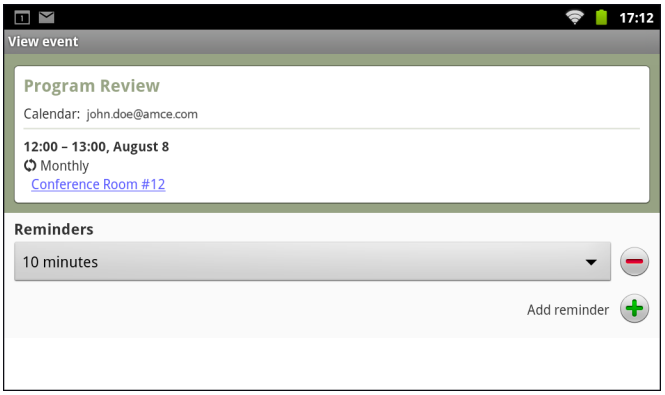


Figure 8-5 *Event View*

In the **Attending?** drop-down list, select a response to the event. Options: **(no response)**, **Yes**, **Maybe** or **No**. Other attendees' status also displayed. Event times are shown in the local time zone.

In the **Reminders** drop-down list, set the time to change any event reminders or touch the plus button to add one.

Creating an Event

To create an event:

In any Calendar view, touch > **More** > **New event**. The **Event details** screen appears.

Also touch and hold a spot in **Day**, **Week**, or **Month** view. Touch **New event** to open the Event details screen with that day and time already entered.

1. In the **What** field, enter a title for the event.
2. Touch the **From** date button to open the set date dialog box. Set the date and then touch **Set**.
3. Touch the **From** time button to open the set time dialog box. Set the time and then touch **Set**.
4. Touch the **To** date button to open the set date dialog box. Set the date and then touch **Set**.
5. Touch the **To** time button to open the set time dialog box. Set the time and then touch **Set**.
6. Touch the **Time zone** button to change the time zone setting, if required.
7. In the **Where** field, enter the location of the event.
8. In the **Description** field, enter a description for the event.
9. In the **Calendar** drop-down list, select the account for this event (if more than one account is set up.)
10. In the **Guests** field, enter additional attendees. Separate multiple email addresses with commas (,).
11. In the **Repetition** drop-down list, select how often the event repeats. Options: **One-time event**, **Daily**, **Every weekday (Mon-Fri)**, **Weekly**, **Monthly** or **Yearly**.

    NOTE Touch > **Show extra options** to show two extra options: **Show me as** and **Privacy**.

12. In the **Show me as** drop-down list, select whether other Options: **Busy** or **Available**.

13. In the **Privacy** drop-down list, select the privacy level. Options: **Default**, **Private** or **Public**.
14. In the **Reminders** drop-down list, select the amount of time before the event that Calendar notifies the user of the upcoming event.
15. Touch **Done**. The event is added to the calendar.

Editing an Event

To edit an event:

1. In any Calendar view, touch and hold an event and then touch **Edit event**.
2. Touch > **Show extra options** to add or edit event details.
3. Make changes to the event.
4. Scroll to the bottom of the screen and touch **Done**.

Deleting an Event

To delete an event:

1. In any Calendar view, touch and hold an event and then touch **Delete event**.
2. Touch **OK**.

Changing Calendar Settings

To change **Calendar** settings:

1. Touch > **Calendar**.
2. Open a Calendar view.
3. Touch > **More** > **Settings**.
   - **Calendar view settings**
     - **Hide declined events** - Check to hide events that were declined.
     - **Use home time zone** - Check to display calendars and event times in home time zone when traveling.
     - **Home time zone** - Opens a dialog box to set the time zone that Calendar uses when traveling.
   - **Reminder settings**
     - **Set alerts & notifications** - Opens a dialog box to configure event reminders to open an alert, send a notification or turn off event notifications.
     - **Select ringtone** - Opens a dialog box to select the ringtone to sound when an event reminder is received.
     - **Vibrate** - Opens a dialog box to configure the ET1 to vibrate when an event reminder is received. Options: **Always**, **Only when silent** or **Never**.
     - **Default reminder time** - Opens a dialog box to select the default time before an event for event reminders.

- **About**
  - **Build version** - Displays the version number.

CHAPTER 9 ACCESSORIES

Introduction

Table 9-1 lists the accessories available for the ET1.

Table 9-1 *ET1 Accessories*

Accessory	Part Number	Description
Cradles		
Single-slot USB Docking Cradle	DC1000-1000U	Charges the ET1 main battery and a spare battery. Synchronizes the ET1 with a host computer through a USB connection.
Four-slot Charge Only Docking Cradle	DC1000-4000C	Charges up to four ET1 devices.
Chargers		
Four-slot Spare Battery Charger	SAC1000-4000C	Charges up to four ET1 battery packs.
Power Supply	PWRS-14000-148C	Provides power to the Single-slot USB Docking cradle or the USB/Charge cable. 12 VDC, 4.16A.
Power Supply	PWRS-14000-241R	Provides power to the Four-slot Charge Only Docking cradle or the Four-slot Battery Charger. 12 VDC, 9A.
Cables		
USB Charge Cable	25-153149-01R	Provides power to the ET1 and USB communication with a host computer.
DC Charge Cable	50-16002-029R	Connects one power supply to the one Four-slot Charge Only Docking Cradle or the Four-slot Battery Charger.

Table 9-1 *ET1 Accessories (Continued)*

Accessory	Part Number	Description
2-way Charge Cable	25-153150-01R	Connects one power supply to: • one Four-slot Charge Only Docking Cradle and one Four-slot Battery Charger • two Four-slot Battery Chargers.
US AC Line Cord (3-wire)	23844-00-00R	Provides power to the power supplies.
International AC line Cord	-	Provides power to the power supplies. Purchase separately.
Miscellaneous		
Spare 4620 mAh lithium-ion battery	BTRY-ET01EAB0E BTRY-ET01EAB0E-10	Replacement 4620 mAh battery. Replacement 4620 mAh battery (10-pack)
Handstrap	SG-ET0123245-01R	Adjustable and 360-degree rotatable handstrap that mounts on the back of the ET1 and provides secure option for holding the device.

Single-slot USB Docking Cradle

The Single-slot USB Docking cradle:

- Provides 12 VDC power for operating the ET1.
- Synchronizes information between the ET1 and a host computer. Refer to the *ET1 Enterprise Tablet Integrator Guide* for information on setting up a connection to a host computer.
- Charges the battery.

Charging the ET1 Battery

Connect the cradle to power. Insert the ET1 into the slot to begin charging.

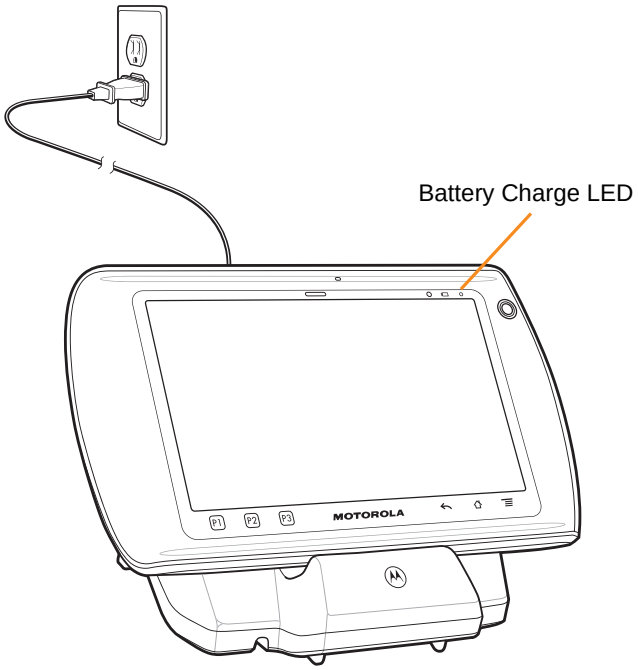


Figure 9-1 *ET1 Battery Charging*

The ET1's charge Battery Charge light emitting diode (LED) indicates the status of the battery charging in the ET1. See *Table 1-2 on page 1-6* for charging status indications. The 4620 mAh battery fully charges in approximately six hours.

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the ET1. To accomplish this, for small periods of time, the ET1 or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The ET1 indicates when charging is disabled due to abnormal temperatures via Battery Charge LED. See *Table 1-2 on page 1-6*.

Communication

When the ET1 is connected to a host computer using the Single-slot USB Docking cradle, the ET1 appears as a **Removable Disk** on the host computer. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information.

Four-slot Charge Only Docking Cradle

The Four-slot Charge Only Docking cradle:

- Provides 12 VDC power for operating the ET1.
- Simultaneously charges up to four ET1s.

Charging

Insert the ET1 into a slot to begin charging.

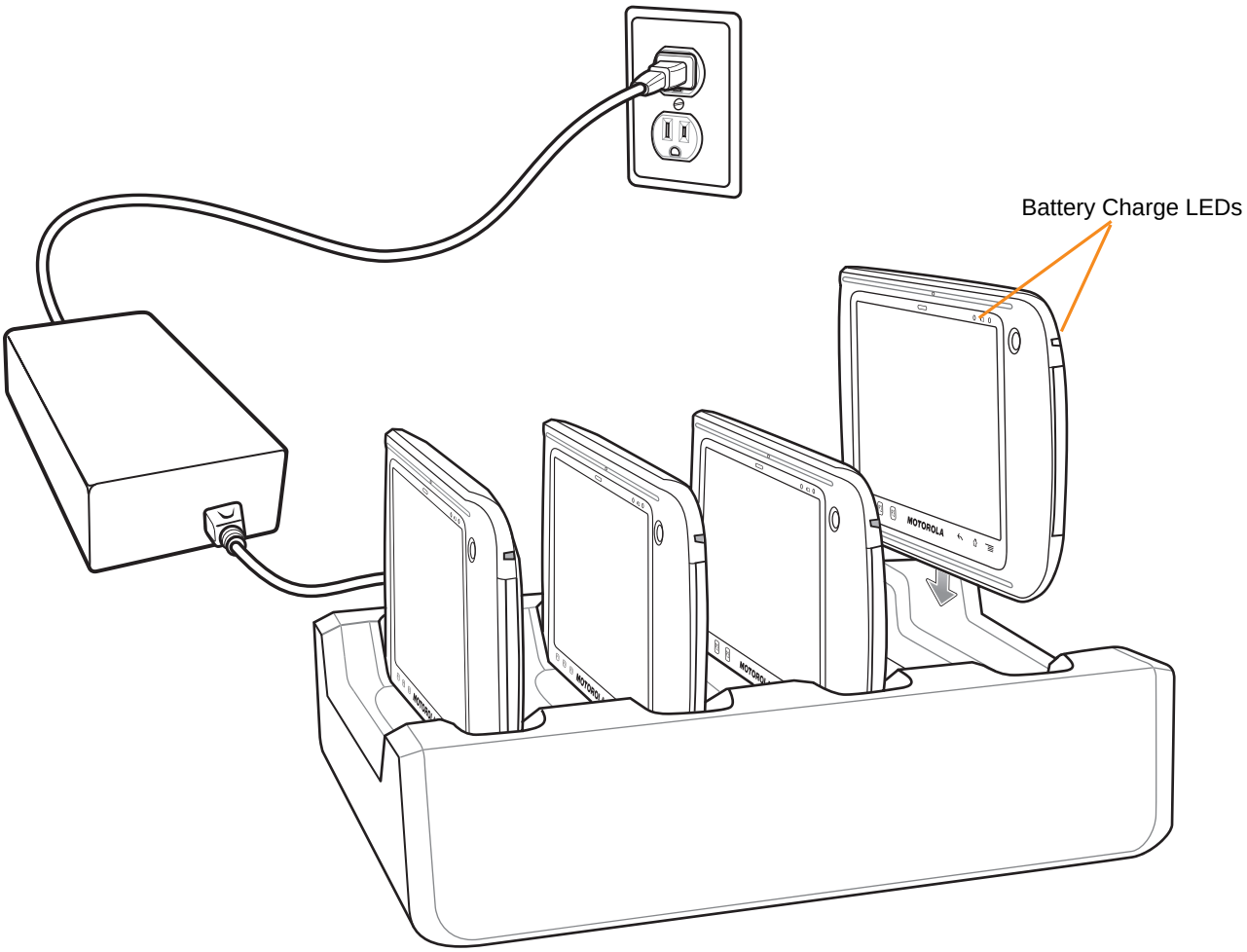


Figure 9-2 *ET1 Battery Charging*

The ET1's Battery Charge LED shows the status of the battery charging in the ET1. See *Table 1-2 on page 1-6* for charging status indications. The 4620 mAh battery fully charges in approximately six hours.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the ET1. To accomplish this, for small periods of time, the ET1 or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The ET1 indicates when charging is disabled due to abnormal temperatures via the Battery Charge LED. See *Table 1-2 on page 1-6*.

Four-slot Battery Charger

The Four-slot Battery Charger:

- Provides 12 VDC power for charging the batteries.
- Simultaneously charges up to four ET1 batteries.

To charge a spare battery:

1. Connect the charger to a power source.
2. Insert the battery into a battery charging well and gently press down on the battery to ensure proper contact.

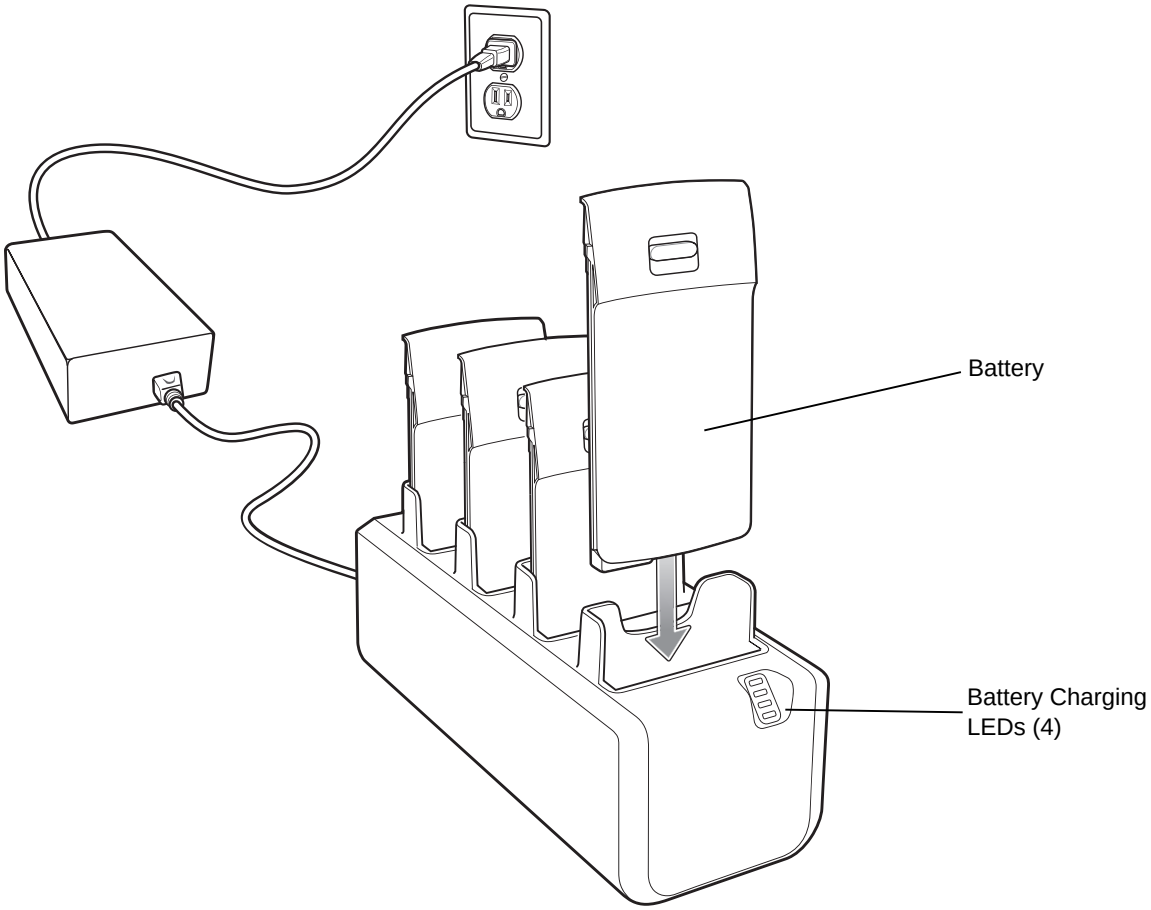


Figure 9-3 *Four Slot Battery Charger*

The Four-slot Battery Charger has four amber Battery Charging LEDs, one for each battery charging well. See *Table 9-2* for charging status indications. The 4620 mAh battery fully charges in approximately six hours.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the ET1. To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures. The charger indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 9-2*.

Table 9-2 *Battery LED Charging Indicators*

LED	Indication
Off	No battery in slot. Battery is not charging. Battery is not inserted correctly in the charger. Charger is not powered.
Slow Blinking Amber	Battery is charging.
Solid Green	Charging complete.
Fast Blinking Amber	Charging error.

USB/Charge Cable

The USB/Charge cable:

- Provide the ET1 with operating and charging power.
- Synchronize information between the ET1 and a host computer.

Charging

To charge the ET1 battery:

1. Connect the AC line cord to the power supply.
2. Connect the power supply output connector to the input power port on the USB/Charge cable.

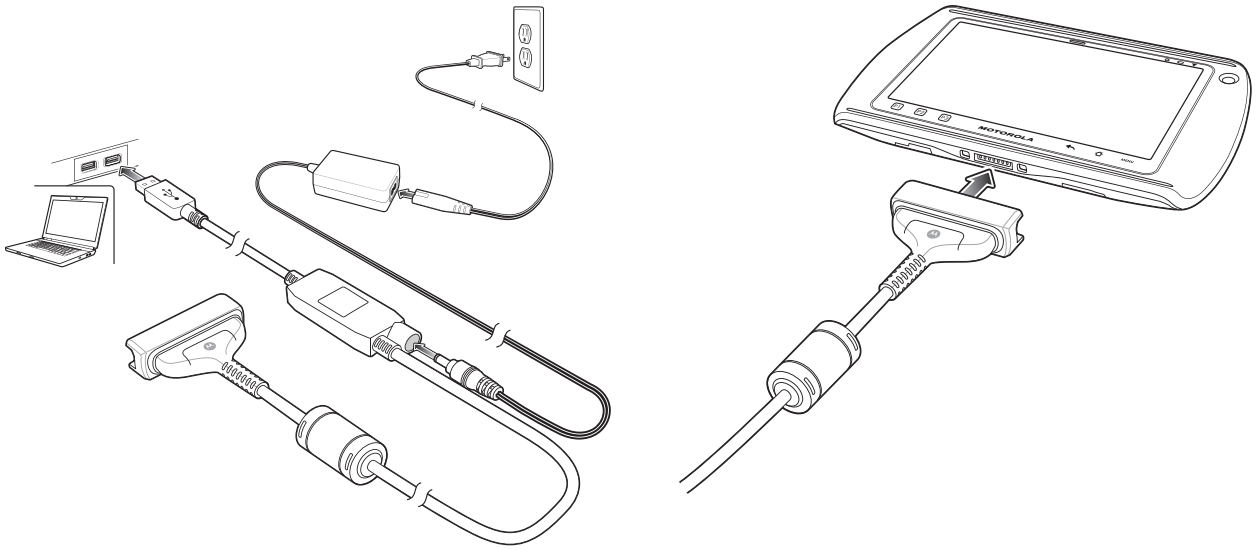


Figure 9-4 *USB/Charge Cable Setup*

3. Connect the USB/Charge Cable cup to the bottom of the ET1. Align the ends of the cup with the alignment marks on the ET1. The Battery Charge LED indicates the battery charging status. See *Table 1-2 on page 1-6* for charging status indications. The 4620 mAh battery charges in approximately six hours.

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the ET1. To accomplish this, for small periods of time, the ET1 alternately enables and disables battery charging to keep the battery at acceptable temperatures. The ET1 indicates when charging is disabled due to abnormal temperatures via the Battery Charge LED. See *Table 1-2 on page 1-6*.

Communication

When the ET1 is connected to a host computer using the USB/Charge cable, the ET1 appears as a **Removable Disk** on the host computer. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information.

Host USB Module

The USB Host Module provides USB Host connection to a peripheral.

To connect to a peripheral:

1. Lift the connector plug.
2. Connect the microUSB connector to the USB Host Module.
3. Connect the other end of the USB cable to the peripheral.

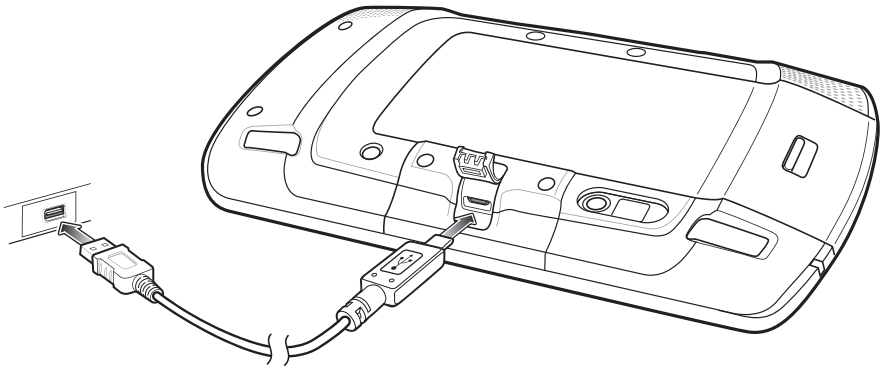


Figure 9-5 *USB Host Module Connection*

CHAPTER 10 MAINTENANCE & TROUBLESHOOTING

Introduction

This chapter includes instructions on cleaning and storing the ET1, and provides troubleshooting solutions for potential problems during ET1 operation.

Maintaining the ET1

For trouble-free service, observe the following tips when using the ET1:

- Do not scratch the screen of the ET1. When working with the ET1, use a finger or approved stylus or pen intended for use with a capacitive touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the ET1 screen.
- The touch-sensitive screen of the ET1 is glass. Do not to drop the ET1 or subject it to strong impact.
- Protect the ET1 from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- Do not store or use the ET1 in any location that is dusty, damp, or wet.
- Use a soft lens cloth to clean the ET1. If the surface of the ET1 screen becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.
- Periodically replace the rechargeable battery to ensure maximum battery life and product performance. Battery life depends on individual usage patterns.

Battery Safety Guidelines

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non commercial environment.
- Follow battery usage, storage, and charging guidelines found in this guide.
- Improper battery use may result in a fire, explosion, or other hazard.

- To charge the mobile device battery, the battery and charger temperatures must be between +32 ºF and +104 ºF (0 ºC and +40 ºC)
- Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact Motorola Solutions Global Customer Support Center.
- For devices that utilize a USB port as a charging source, the device shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- To enable authentication of an approved battery, as required by IEEE1725 clause 10.2.1, all batteries will carry a Motorola hologram. Do not fit any battery without checking it has the Motorola authentication hologram.
- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.
- Battery usage by children should be supervised.
- Please follow local regulations to properly dispose of used re-chargeable batteries.
- Do not dispose of batteries in fire.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- If you suspect damage to your equipment or battery, contact Motorola Solutions Global Customer Support Center to arrange for inspection.

Cleaning

CAUTION Always wear eye protection.

Read warning label on compressed air and alcohol product before using.

If you have to use any other solution for medical reasons please contact Motorola for more information.

WARNING! **Avoid exposing this product to contact with hot oil or other flammable liquids. If such exposure occurs, unplug the device and clean the product immediately in accordance with these guidelines.**

Approved Cleanser Active Ingredients

100% of the active ingredients in any cleaner must consist of one or some combination of the following: isopropyl alcohol, bleach/sodium hypochlorite, hydrogen peroxide or mild dish soap.

Harmful Ingredients

The following chemicals are known to damage the plastics on the ET1 and should not come in contact with the device: ammonia solutions, compounds of amines or ammonia; acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; acqueous or alcoholic alkaline solutions; ethanolamine; toluene; trichloroethylene; benzene; carbolic acid and TB-lysoform.

Cleaning Instructions

Do not apply liquid directly to the ET1. Dampen a soft cloth or use pre-moistened wipes. Do not wrap the device in the cloth or wipe, but gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Allow the unit to air dry before use.

Special Cleaning Notes

Many vinyl gloves contain phthalate additives, which are often not recommended for medical use and are known to be harmful to the housing of the ET1. The ET1 should not be handled while wearing vinyl gloves containing phthalates, or before hands are washed to remove contaminant residue after gloves are removed. If products containing any of the harmful ingredients listed above are used prior to handling the ET1, such as hand sanitizer that contain ethanolamine, hands must be completely dry before handling the ET1 to prevent damage to the plastics.

Materials Required

- Alcohol wipes
- Lens tissue
- Cotton-tipped applicators
- Isopropyl alcohol
- Can of compressed air with a tube.

Cleaning the ET1

Housing

Using the alcohol wipes, wipe the housing including keys and in-between keys.

Display

The display can be wiped down with the alcohol wipes, but care should be taken not to allow any pooling of liquid around the edges of the display. Immediately dry the display with a soft, non-abrasive cloth to prevent streaking.

Camera Window

Wipe the camera window periodically with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.

Connector

1. Remove the main battery from mobile computer. See *Replacing the Battery on page 1-7*.
2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.

3. Rub the cotton portion of the cotton-tipped applicator back-and-forth across the connector on the bottom of the ET1. Do not leave any cotton residue on the connector.
4. Repeat at least three times.
5. Use the cotton-tipped applicator dipped in alcohol to remove any grease and dirt near the connector area.
6. Use a dry cotton-tipped applicator and repeat steps 4 through 6.

CAUTION Do not point nozzle at yourself and others, ensure the nozzle or tube is away from your face.

7. Spray compressed air on the connector area by pointing the tube/nozzle about ½ inch away from the surface.
8. Inspect the area for any grease or dirt, repeat if required.

Cleaning Cradle Connectors

To clean the connectors on a cradle:

1. Remove the DC power cable from the cradle.
2. Dip the cotton portion of the cotton-tipped applicator in isopropyl alcohol.
3. Rub the cotton portion of the cotton-tipped applicator along the pins of the connector. Slowly move the applicator back-and-forth from one side of the connector to the other. Do not leave any cotton residue on the connector.
4. All sides of the connector should also be rubbed with the cotton-tipped applicator.

CAUTION Do not point nozzle at yourself and others, ensure the nozzle or tube is pointed away from your face.

5. Spray compressed air in the connector area by pointing the tube/nozzle about ½ inch away from the surface.
6. Remove any lint left by the cotton-tipped applicator.
7. If grease and other dirt can be found on other areas of the cradle, use a lint-free cloth and alcohol to remove.
8. Allow at least 10 to 30 minutes (depending on ambient temperature and humidity) for the alcohol to air dry before applying power to cradle.

   If the temperature is low and humidity is high, longer drying time is required. Warm temperature and dry humidity requires less drying time.

Cleaning Frequency

The cleaning frequency is up to the customer's discretion due to the varied environments in which the mobile devices are used. They may be cleaned as frequently as required, but it is advisable to clean the camera window periodically when used in dirty environments to ensure optimum performance. However when used in dirty environments it may be advisable to periodically clean the camera window to ensure optimum scanning performance.

Troubleshooting

ET1 Enterprise Tablet

Table 10-1 *Troubleshooting the ET1 Enterprise Tablet*

Problem	Cause	Solution
When the user presses the Power button, the ET1 does not turn on.	Battery is completely discharged.	Re-charge or replace the battery.
	Battery not installed properly.	Install the battery properly. See *Installing the Battery on page 1-4*.
	Power button not held down long enough.	Press the Power button until the Battery Charge LED flashes three times.
	ET1 not responding.	Perform a hard reset. See *Resetting the ET1 on page 2-15*.
When the user presses the Power button the ET1 does not turn on but the Decode LED blinks yellow.	Battery charge level is very low.	Re-charge or replace the battery.
Battery did not charge.	Battery failed.	Replace battery. If the ET1 still does not operate, perform a hardware reset. See *Resetting the ET1 on page 2-15*.
	ET1 was removed from cradle while battery was charging.	Insert ET1 in cradle. The 4620 mAh battery fully charges in less than six hours.
	Extreme battery temperature.	Battery does not charge if ambient temperature is below 0°C (32°F) or above 40°C (104°F).
During data communication, no data transmitted, or transmitted data was incomplete.	ET1 removed from cradle or disconnected from host computer during communication.	Replace the ET1 in the cradle, or reattach the communication cable and re-transmit.
	Incorrect cable configuration.	See the system administrator.
No sound.	Volume setting is low or turned off.	Adjust the volume.
ET1 turns off.	ET1 is inactive.	The display turns off after a period of inactivity. Set this period to 15 seconds, 30 seconds, 1, 2, 10, or 30 minutes.
	Battery is depleted.	Recharge or replace the battery.

Table 10-1 *Troubleshooting the ET1 Enterprise Tablet (Continued)*

Problem	Cause	Solution
A message appears stating not enough storage memory.	Too many applications installed on the ET1.	Remove user-installed applications on the ET1 to recover memory. Select > **Settings** > **Applications** > **Manage Applications**. Select the unused programs and touch **Uninstall.**
The ET1 does not decode when reading bar code.	DataWedge is not enable.	Ensure that DataWedge is enabled and configured properly. Refer to the *ET1 Enterprise Tablet Integrator Guide* for more information.
	Unreadable bar code.	Ensure the symbol is not defaced.
	Distance between the ET1 and bar code is incorrect.	Place the ET1 within proper scanning range.
	ET1 is not programmed for the bar code type.	Program the ET1 to accept the type of bar code being scanned. Refer to the ET1 Enterprise Tablet Integrator Guide for DataWedge configuration.
	ET1 is not programmed to generate a beep.	If the ET1 does not beep on a good decode, set the application to generate a beep on good decode.
ET1 cannot find any Bluetooth devices nearby.	Too far from other Bluetooth devices.	Move closer to the other Bluetooth device(s), within a range of 10 meters (30 feet).
	The Bluetooth device(s) nearby are not turned on.	Turn on the Bluetooth device(s) to find.
	The Bluetooth device(s) are not in discoverable mode.	Set the Bluetooth device(s) to discoverable mode. If needed, refer to the device's user documentation for help.

Single-slot USB Docking Cradle

Table 10-2 *Troubleshooting the Single-slot USB Docking Cradle*

Symptom	Possible Cause	Action
ET1 battery is not charging.	ET1 was removed from cradle or cradle was unplugged from AC power too soon.	Ensure cradle is receiving power. Ensure ET1 is seated correctly. Confirm the battery is charging. The 4620 mAh battery fully charges in less than six hours.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	The ET1 is not fully seated in the cradle.	Remove and re-insert the ET1 into the cradle, ensuring it is firmly seated.
	Extreme battery temperature.	Battery does not charge if ambient temperature is below 0°C (32°F) or above 40°C (104°F).
During data communication, no data transmits, or transmitted data was incomplete.	ET1 removed from cradle during communications.	Replace ET1 in cradle and retransmit.
	Communication software is not installed or configured properly.	Perform setup as described in the *ET1 Enterprise Tablet Integrator Guide.*

Four-slot Charge Only Docking Cradle

Table 10-3 *Troubleshooting the Four-slot Charge only Docking Cradle*

Symptom	Cause	Solution
Battery is not charging.	ET1 removed from the cradle too soon.	Replace the ET1 in the cradle. The 4620 mAh battery fully charges in less than six hours. Tap > **Settings** > **About device** > **Status** to view battery status.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	ET1 is not inserted correctly in the cradle.	Remove the ET1 and reinsert it correctly. Verify charging is active. Tap > **Settings** > **About device** > **Status** to view battery status.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).

Four-slot Battery Charger

Table 10-4 *Troubleshooting The Four-slot Battery Charger*

Symptom	Possible Cause	Action
Battery not charging.	Battery was removed from the charger or charger was unplugged from AC power too soon.	Re-insert the battery in the charger or re-connect the charger's power supply. The 4620 mAh battery fully charges in less than six hours.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	Battery contacts not connected to charger.	Verify that the battery is seated in the battery well correctly with the contacts facing down.

USB/Charge Cable

Table 10-5 *Troubleshooting the USB/Charge Cable*

Symptom	Possible Cause	Action
Battery is not charging.	ET1 was disconnected from AC power too soon.	Connect the power cable correctly. Confirm main battery is charging under > **Settings** > **About device** > **Status**. The 4620 mAh battery fully charges in less than six hours.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	The ET1 is not connected to power.	Detach and re-attach the power cable to the ET1, ensuring it is firmly connected.
During data communication, no data transmits, or transmitted data was incomplete.	Cable was disconnected from ET1 during communications.	Re-attach the cable and retransmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software is not installed or configured properly.	Perform setup as described in the *ET1 Enterprise Tablet Integrator Guide*.

APPENDIX A TECHNICAL SPECIFICATIONS

ET1 Technical Specifications

The following tables summarize the ET1's intended operating environment and technical hardware specifications.

Table A-1 *ET1 Technical Specifications*

Item	Description
Physical Characteristics	
Dimensions	Height: 130.5 mm (5.14 in.) Width: 224 mm (8.82 in.) Depth: 25 mm (0.98 in.)
Weight	630 g (22.4 oz.)
Display	7 in. capacitive; 1024 x 600; 350 nit; Corning® Gorilla® Glass
Touch Panel	Capacitive multi-touch
Backlight	LED backlight
Battery Pack	Rechargeable Lithium Ion 3.7V, 4620 mAh Smart battery
Backup Battery	NiMH battery (rechargeable) 15 mAh 3.6 V (not user accessible).
Expansion Slot	User accessible microSD slot, up to 32 GB.
Connectivity	Two USB interfaces: one USB 2.0 OTG connector (docking connector) and one USB 2.0 Host connector (expansion module port); HDMI output; communication via cradle and expansion ports; USB 2.0 host via expansion module.
Notification	LED, audio and vibration.
Keypad Options	On-screen keyboard

Table A-1 *ET1 Technical Specifications (Continued)*

Item	Description
Audio	Stereo speakers, microphone and headset connector (mono, 2.5 mm jack with microphone.)
Performance Characteristics	
CPU	Texas Instruments OMAP 4430 @ 1 GHz
Operating System	Android-based ASOP 2.3
Memory	1GB RAM, 4 GB Flash plus 4 GB microSD; user accessible microsD card slot (supports up to 32 GB)
Output Power (USB)	Docking Connector: 5 VDC @ 500 mA max. Expansion Module: 5 VDC @ 500 mA max.
User Environment	
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Charging Temperature	0° C to 40° C (32°F to 104°F)
Humidity	10% to 95% RH non-condensing
Drop Specification	Multiple 1.2 m (4 ft.) drops per MIL-STD 810G specifications.
Electrostatic Discharge (ESD)	+/-15kVdc air discharge, +/-8kVdc direct discharge, +/-8kVdc indirect discharge
Sealing	IP54
Wireless LAN Data Communications	
Wireless Local Area Network (WLAN) radio	IEEE® 802.11a/b/g/n with internal antenna
Data Rates Supported	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps. Note that 802.11n data rates may be higher.
Operating Channels	Chan 36-165 (5180 – 5825 MHz), Chan 1-13 (2412-2472 MHz); actual operating channels/frequencies depend on regulatory rules and certification agency
Security	**Security Modes:** Legacy, WPA and WPA2 **Encryption:** WEP (40 and 128 bit), TKIP and AES **Authentication:** TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP), TTLS (PAP), PEAP-TLS, PEAP (MS-CHAP v2), EAP -FAST-TLS, EAP-FAST (MS-CHAP v2).
Spreading Technique	Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM)
Wireless PAN Data and Voice Communications	
Bluetooth	Class II, v 2.1 with EDR; integrated antenna.

Table A-1 *ET1 Technical Specifications (Continued)*

Item	Description
Data Capture	
Rear-facing Camera	For bar code scanning and image capture: 8 MP auto-focus camera with user controllable LED flash, illumination and aiming; captures 1D and 2D bar codes, photographs, video, signatures and documents.
Front-facing Camera	VGA camera optimized for video collaboration and low lighting condition.
Sensors	
Gyroscope	Maintains orientation based on principles of conservation of angular momentum.
Motion Sensor	3-axis accelerometer that enables motion sensing applications for dynamic screen orientation and power management.
Ambient Light Sensor	Automatically adjusts display brightness.
Electronic Compass	Independent — does not depend on GPS.

Table A-2 *Data Capture Options*

Item	Description		
1D Bar Codes	Code 39	UPCA	UPCE
	EAN-13	EAN-8	Code 128
	UCC/EAN 128	ISBT128	Code 93
	Code 11	Web Code	MSI
	Discrete 2 of 5	Interleaved 2 of 5	Codabar
	UPCE1	Coupon Code	Trioptic Code 39
	Chinese 2 of 5	Korean 2 of 5	GS1 DataBar
	GS1 DataBar Truncated	GS1 DataBar Limited	GS1 DataBar Stacked
	GS1 DataBar Expanded	GS1 DataBar Expanded Stacked	
	GS1 DataBar Stacked Omni		
2D bar Codes	PDF	Micro PDF	Macro Micro PDF
	Composite C	Composite AB	Data Matrix
	QR Code	Micro QR	Aztec
	Linked Aztec	US Planet	US Postnet
	UK Postal	Japan Postal	Australian Postal
	Dutch Postal	Image	

ET1 Accessory Specifications

Single-slot USB Docking Cradle

Table A-3 *Single-slot USB Docking Cradle Technical Specifications*

Feature	Description
Dimensions	Height: 61.62 mm (2.43 in.) Width:151.9 mm (5.98 in.) Depth: 138.39 mm (5.45 in.)
Weight	620 g (21.87 oz)
Input Voltage	12 VDC
Power Consumption (with ET1)	24 watts
Interface	USB
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Charging Temperature	0°C to 40°C (32°F to 104°F)
Humidity	5% to 95% non-condensing
Drop	76.2 cm (30.0 in.) drops to vinyl tiled concrete at room temperature
Electrostatic Discharge (ESD)	+/- 15 kV air +/- 8 kV contact

Four-slot Charge Only Docking Cradle

Table A-4 *Four-slot Charge Only Docking Cradle Technical Specifications*

Feature	Description
Dimensions	Height: 83.45 mm (3.29 in.) Width: 243.28 mm (9.58 in.) Depth: 330.17 mm (13.00 in.)
Weight	1.678 kg (3.70 lbs.)
Input Voltage	12 VDC
Power Consumption (with four ET1s	50 watts
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Charging Temperature	0°C to 40°C (32°F to 104°F)

Table A-4 *Four-slot Charge Only Docking Cradle Technical Specifications (Continued)*

Feature	Description
Humidity	5% to 95% non-condensing
Drop	76.2 cm (30.0 in.) drops to vinyl tiled concrete at room temperature
Electrostatic Discharge (ESD)	+/- 15 kV air +/- 8 kV contact

Four-slot Battery Charger

Table A-5 *Four-slot Battery Charger Technical Specifications*

Feature	Description
Dimensions	Height:110.62 mm (4.36 in.) Width:100.88 mm (3.97 in.) Depth: 245.15 mm (9.65)
Weight	580 g (20.46 in.)
Input Voltage	12 VDC
Power Consumption (with four batteries)	25 watts
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Charging Temperature	0°C to 40°C (32°F to 104°F)
Humidity	5% to 95% non-condensing
Drop	76.2 cm (30.0 in.) drops to vinyl tiled concrete at room temperature
Electrostatic Discharge (ESD)	+/- 15 kV air +/- 8 kV contact

USB/Charge Cable

Table A-6 *USB/Charge Cable Technical Specifications*

Feature	Description
Length	160.0 cm (63.0 in.)
Operating Temperature	-10°C to 50°C (14°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	10% to 95% non-condensing
Electrostatic Discharge (ESD)	+/- 15 kV air +/- 8 kV contact

GLOSSARY

A

API. (Application Programming Interface) An interface by means of which one software component communicates with or controls another. Usually used to refer to services provided by one software component to another, usually via software interrupts or function calls

AFH. Adaptive Frequency Hopping.

B

Bar Code. A pattern of variable-width bars and spaces which represents numeric or alphanumeric data in machine-readable form. The general format of a bar code symbol consists of a leading margin, start character, data or message character, check character (if any), stop character, and trailing margin. Within this framework, each recognizable symbology uses its own unique format. See **Symbology**.

Bit. Binary digit. One bit is the basic unit of binary information. Generally, eight consecutive bits compose one byte of data. The pattern of 0 and 1 values within the byte determines its meaning.

Bits per Second (bps). Bits transmitted or received.

Bluetooth. A wireless protocol utilizing short-range communications technology facilitating data transmission over short distances.

boot or boot-up. The process a computer goes through when it starts. During boot-up, the computer can run self-diagnostic tests and configure hardware and software.

Byte. On an addressable boundary, eight adjacent binary digits (0 and 1) combined in a pattern to represent a specific character or numeric value. Bits are numbered from the right, 0 through 7, with bit 0 the low-order bit. One byte in memory is used to store one ASCII character.

C

CDRH. Center for Devices and Radiological Health. A federal agency responsible for regulating laser product safety. This agency specifies various laser operation classes based on power output during operation.

CDRH Class 1. This is the lowest power CDRH laser classification. This class is considered intrinsically safe, even if all laser output were directed into the eye's pupil. There are no special operating procedures for this class.

CDRH Class 2. No additional software mechanisms are needed to conform to this limit. Laser operation in this class poses no danger for unintentional direct human exposure.

Character. A pattern of bars and spaces which either directly represents data or indicates a control function, such as a number, letter, punctuation mark, or communications control contained in a message.

Codabar. A discrete self-checking code with a character set consisting of digits 0 to 9 and six additional characters: (“-”, “$”, “:”, “/”, “,” and “+”).

Code 128. A high density symbology which allows the controller to encode all 128 ASCII characters without adding extra symbol elements.

Code 3 of 9 (Code 39). A versatile and widely used alphanumeric bar code symbology with a set of 43 character types, including all uppercase letters, numerals from 0 to 9 and 7 special characters (“-”, “.”, “/”, “+”, “%”, “$” and space). The code name is derived from the fact that 3 of 9 elements representing a character are wide, while the remaining 6 are narrow.

Code 93. An industrial symbology compatible with Code 39 but offering a full character ASCII set and a higher coding density than Code 39.

COM port. Communication port; ports are identified by number, e.g., COM1, COM2.

Cradle. A cradle is used for charging the terminal battery and for communicating with a host computer, and provides a storage place for the terminal when not in use.

D

Decode. To recognize a bar code symbology (e.g., UPC/EAN) and then analyze the content of the specific bar code scanned.

Decode Algorithm. A decoding scheme that converts pulse widths into data representation of the letters or numbers encoded within a bar code symbol.

Decryption. Decryption is the decoding and unscrambling of received encrypted data. Also see, **Encryption** and **Key**.

Depth of Field. The range between minimum and maximum distances at which a scanner can read a symbol with a certain minimum element width.

Discrete 2 of 5. A binary bar code symbology representing each character by a group of five bars, two of which are wide. The location of wide bars in the group determines which character is encoded; spaces are insignificant. Only numeric characters (0 to 9) and START/STOP characters may be encoded.

E

EAN. European Article Number. This European/International version of the UPC provides its own coding format and symbology standards. Element dimensions are specified metrically. EAN is used primarily in retail.

EMDK. Enterprise Mobility Developer's Kit.

Enterprise Tablet. In this text, *enterprise tablet* refers to the ET1. It can be set up to run as a stand-alone device, or it can be set up to communicate with a network, using wireless radio technology.

ESD. Electro-Static Discharge

F

File Transfer Protocol (FTP). A TCP/IP application protocol governing file transfer via network or telephone lines. See **TCP/IP.**

Flash Memory. Flash memory is nonvolatile, semi-permanent storage that can be electronically erased in the circuit and reprogrammed.

FHSS (Frequency Hopping Spread Spectrum)**.** A method of transmitting radio signals by rapidly switching a carrier among many frequency channels, using a pseudorandom sequence known to both transmitter and receiver.

H

Hz. Hertz; A unit of frequency equal to one cycle per second.

Host Computer. A computer that serves other terminals in a network, providing such services as computation, database access, supervisory programs and network control.

I

IEC. International Electrotechnical Commission. This international agency regulates laser safety by specifying various laser operation classes based on power output during operation.

IEC (825) Class 1. This is the lowest power IEC laser classification. Conformity is ensured through a software restriction of 120 seconds of laser operation within any 1000 second window and an automatic laser shutdown if the scanner's oscillating mirror fails.

IEEE Address. See **MAC Address**.

Input/Output Ports. I/O ports are primarily dedicated to passing information into or out of the terminal's memory. ET1 mobile computers include USB ports.

Interleaved 2 of 5. A binary bar code symbology representing character pairs in groups of five bars and five interleaved spaces. Interleaving provides for greater information density. The location of wide elements (bar/spaces) within each group determines which characters are encoded. This continuous code type uses no intercharacter spaces. Only numeric (0 to 9) and START/STOP characters may be encoded.

Internet Protocol Address. See **IP**.

I/O Ports. The connection between two devices, defined by common physical characteristics, signal characteristics, and signal meanings. Types of interfaces include RS-232 and USB.

IP. Internet Protocol. The IP part of the TCP/IP communications protocol. IP implements the network layer (layer 3) of the protocol, which contains a network address and is used to route a message to a different network or subnetwork. IP accepts “packets” from the layer 4 transport protocol (TCP or UDP), adds its own header to it and delivers a “datagram” to the layer 2 data link protocol. It may also break the packet into fragments to support the maximum transmission unit (MTU) of the network.

IP Address. (Internet Protocol address) The address of a computer attached to an IP network. Every client and server station must have a unique IP address. A 32-bit address used by a computer on a IP network. Client workstations have either a permanent address or one that is dynamically assigned to them each session. IP addresses are written as four sets of numbers separated by periods; for example, 204.171.64.2.

IPX/SPX. Internet Package Exchange/Sequential Packet Exchange. A communications protocol for Novell. IPX is Novell’s Layer 3 protocol, similar to XNS and IP, and used in NetWare networks. SPX is Novell's version of the Xerox SPP protocol.

ISM. Industry Scientific and Medical

K

Key. A key is the specific code used by the algorithm to encrypt or decrypt the data. Also see, **Encryption** and **Decrypting**.

L

LASER. Light Amplification by Stimulated Emission of Radiation.The laser is an intense light source. Light from a laser is all the same frequency, unlike the output of an incandescent bulb. Laser light is typically coherent and has a high energy density.

laser scanner. A type of bar code reader that uses a beam of laser light.

LED Indicator. A semiconductor diode (LED - Light Emitting Diode) used as an indicator, often in digital displays. The semiconductor uses applied voltage to produce light of a certain frequency determined by the semiconductor's particular chemical composition.

Light Emitting Diode. See **LED**.

Liquid Crystal Display (LCD). A display that uses liquid crystal sealed between two glass plates. The crystals are excited by precise electrical charges, causing them to reflect light outside according to their bias. They use little electricity and react relatively quickly. They require external light to reflect their information to the user.

M

MDN. Mobile Directory Number. The directory listing telephone number that is dialed (generally using POTS) to reach a mobile unit. The MDN is usually associated with a MIN in a cellular telephone -- in the US and Canada, the MDN and MIN are the same value for voice cellular users. International roaming considerations often result in the MDN being different from the MIN.

MIN. Mobile Identification Number. The unique account number associated with a cellular device. It is broadcast by the cellular device when accessing the cellular system.

N

Nominal. The exact (or ideal) intended value for a specified parameter. Tolerances are specified as positive and negative deviations from this value.

NVM. Non-Volatile Memory.

O

Open System Authentication. Open System authentication is a null authentication algorithm.

P

PAN . Personal Area Network. Using Bluetooth wireless technology, PANs enable devices to communicate wirelessly. Generally, a wireless PAN consists of a dynamic group of less than 255 devices that communicate within about a 33-foot range. Only devices within this limited area typically participate in the network.

PING. (Packet Internet Groper) An Internet utility used to determine whether a particular IP address is online. It is used to test and debug a network by sending out a packet and waiting for a response.

R

RAM. Random Access Memory. Data in RAM can be accessed in random order, and quickly written and read.

RF. Radio Frequency.

ROM. Read-Only Memory. Data stored in ROM cannot be changed or removed.

Router. A device that connects networks and supports the required protocols for packet filtering. Routers are typically used to extend the range of cabling and to organize the topology of a network into subnets. See **Subnet**.

S

Scanner. An electronic device used to scan bar code symbols and produce a digitized pattern that corresponds to the bars and spaces of the symbol. Its three main components are: 1) Light source (laser or photoelectric cell) - illuminates a bar code,; 2) Photodetector - registers the difference in reflected light (more light reflected from spaces); 3) Signal conditioning circuit - transforms optical detector output into a digitized bar pattern.

SDK. Software Development Kit

Shared Key. Shared Key authentication is an algorithm where both the AP and the MU share an authentication key.

SID. System Identification code. An identifier issued by the FCC for each market. It is also broadcast by the cellular carriers to allow cellular devices to distinguish between the home and roaming service.

Soft Reset. See **Warm Boot**.

Space. The lighter element of a bar code formed by the background between bars.

Specular Reflection. The mirror-like direct reflection of light from a surface, which can cause difficulty decoding a bar code.

Start/Stop Character. A pattern of bars and spaces that provides the scanner with start and stop reading instructions and scanning direction. The start and stop characters are normally to the left and right margins of a horizontal code.

Subnet. A subset of nodes on a network that are serviced by the same router. See **Router**.

Subnet Mask. A 32-bit number used to separate the network and host sections of an IP address. A custom subnet mask subdivides an IP network into smaller subsections. The mask is a binary pattern that is matched up with the IP address to turn part of the host ID address field into a field for subnets. Default is often 255.255.255.0.

Substrate. A foundation material on which a substance or image is placed.

Symbol. A scannable unit that encodes data within the conventions of a certain symbology, usually including start/stop characters, quiet zones, data characters and check characters.

Symbol Aspect Ratio. The ratio of symbol height to symbol width.

Symbol Height. The distance between the outside edges of the quiet zones of the first row and the last row.

Symbol Length. Length of symbol measured from the beginning of the quiet zone (margin) adjacent to the start character to the end of the quiet zone (margin) adjacent to a stop character.

Symbology. The structural rules and conventions for representing data within a particular bar code type (e.g. UPC/EAN, Code 39, PDF417, etc.).

T

TCP/IP. (Transmission Control Protocol/Internet Protocol) A communications protocol used to internetwork dissimilar systems. This standard is the protocol of the Internet and has become the global standard for communications. TCP provides transport functions, which ensures that the total amount of bytes sent is received correctly at the other end. UDP is an alternate transport that does not guarantee delivery. It is widely used for real-time voice and video

transmissions where erroneous packets are not retransmitted. IP provides the routing mechanism. TCP/IP is a routable protocol, which means that all messages contain not only the address of the destination station, but the address of a destination network. This allows TCP/IP messages to be sent to multiple networks within an organization or around the world, hence its use in the worldwide Internet. Every client and server in a TCP/IP network requires an IP address, which is either permanently assigned or dynamically assigned at startup.

Telnet. A terminal emulation protocol commonly used on the Internet and TCP/IP-based networks. It allows a user at a terminal or computer to log onto a remote device and run a program.

TFTP. (Trivial File Transfer Protocol) A version of the TCP/IP FTP (File Transfer Protocol) protocol that has no directory or password capability. It is the protocol used for upgrading firmware, downloading software and remote booting of diskless devices.

Tolerance. Allowable deviation from the nominal bar or space width.

Transmission Control Protocol/Internet Protocol. See **TCP/IP.**

Trivial File Transfer Protocol. See **TFTP.**

U

UDP. User Datagram Protocol. A protocol within the IP protocol suite that is used in place of TCP when a reliable delivery is not required. For example, UDP is used for real-time audio and video traffic where lost packets are simply ignored, because there is no time to retransmit. If UDP is used and a reliable delivery is required, packet sequence checking and error notification must be written into the applications.

UPC. Universal Product Code. A relatively complex numeric symbology. Each character consists of two bars and two spaces, each of which is any of four widths. The standard symbology for retail food packages in the United States.

V

Visible Laser Diode (VLD). A solid state device which produces visible laser light.

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